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WE GUARANTEE, that of this issue more than 9,000 copies were printed; that of those more than 9,000 copies 7,535 were mailed to regular paid subscribers to the Railway Age Gazette, weekly edition, and Railway Age Gazette, Mechanical Edition; 224 were provided for counter and news companies' sales; 241 were mailed to advertisers and correspondents; and 1,000 were provided for distribution at Atlantic City.

There is no doubt that the decorating of cars used in passenger service was, up to a few years ago, carried to extremes. Such embellishments as carving and turning were so freely used that it was an impossibility to thoroughly clean the cars and the lambrequins and heavy curtains that were in common use on parlor cars were a menace to health. In the desire to get away from the over-decorative effect, however, the idea of simplicity has in some cases been carried out to an extent that makes the cars not only appear severely plain but sometimes unfinished. It is by no means beyond the bounds of possibility to obtain simplicity and still retain beauty, and while the lack of decoration is probably due to a desire to keep the cost of the car at a minimum, it should be borne in mind that the traveling public is likely to prove critical in matters of this kind and cars with a reasonable amount of decoration, both inside and out, are more likely to help the passenger department in getting and retaining business than are those in which the decorative feature is neglected.

Decorations on Passenger Cars

The recommendations of the Committee on Train Brake and Signal Equipment, that an investigation be made as to the relative merits of different designs of clasp brakes, as well as a study leading toward a more satisfactory design for hand brake rigging, were referred back to the committee for further action. This offers an opportunity to give the foundation brake gear on passenger equipment a much needed investigation. T. L. Burton, of the Westinghouse Air Brake Company, in a talk before the Air Brake Association convention, held at Detroit the first of last month, laid particular stress on the importance of having the foundation gear correctly designed. It is impossible to have a standard design that will perform satisfactory service on all different designs of underframes and trucks, but there is a great opportunity to increase the braking efficiency by carefully studying the foundation gear. Mr. Burton mentioned instances where even the clasp brake was found to be less efficient than the single shoe brake on account of incorrect design and application of the foundation gear. The Lackawanna has found by stiffening up the members of the foundation gear that it has been able to decrease the stops some 200 or 300 ft. on many of the trains. The committee will find its time well spent if a careful study is made of the subject assigned to it, and the results of its investigations will be of vast interest and profit to all the railroads.

Foundation Brake Gear

President Barnum, during the proceedings on Wednesday morning, urged the committees of the Master Car Builders' Association to keep out of their reports, as far as possible, recommendations which were likely to prove unnecessary and later be eliminated. The proceedings have grown to such a size that it was last year necessary to publish them in two volumes, and with the amount of work before the association continually increasing, the proceedings will increase in size rapidly enough without the introduction of unnecessary items. Committees can assist to a large extent in keeping the size of the volumes within reasonable limits and in making the reports clear and logical, by giving the most careful consideration to their recommendations and eliminating those which are reasonably sure not to be adopted and the consideration of which would only prolong unnecessary discussion.

Avoid Unnecessary Recommendations

The little four by six piece of timber that once served so well as a brake beam would hardly know its descendant of to-day that carries a 12-ton load on its back. And the simple bolting of the brake shoe to the beam differs widely from the carefully designed and constructed structure that now serves to apply the brakes. There is one point, however, that was merely touched on in the discussion of brake beams yesterday that ought to and probably will receive more attention, and that is the method of hanging the beam. It has happened more than once that serious difficulties have arisen because of faulty hanging that has resulted in falling beams, worn heads, lost brakeshoes, flattened wheels and brakes that either would not properly apply or promptly release, because the connection of the beam to the truck was faulty. The brake beam committee has declined to make final recommendations in this matter because it was considered to belong to the truck committee, and it now remains for that committee to do what is needed to settle this important problem.

The Hanging of Brake Beams

A part of President Barnum's address that deserves careful attention is the reference to the proper application and maintenance of safety appliances. The indications are that the work of equipping cars with these appliances is not, in some cases, being carried out rapidly enough to insure its completion by the time specified and every possible step should be taken to remedy this condition. If there are even appearances of laxity on the part of the roads in completing the work they are likely to cause much adverse comment and even drastic governmental action, and it will be agreed that there is enough of both without the railways contributing directly toward further encouragement. Mr. Barnum's recommendation that a man should be retained on every mechanical staff, who is specially qualified to act as an authority on safety appliances, is a good one. There has been a good deal of variation in the manner of putting safety appliances on

Conforming with Safety Appliance Regulations

cars and the appointment of such an inspector should tend toward its elimination and the maintenance of the appliances in proper condition.

Electro-Pneumatic Signal System

Attention was called by the committee on train brake and signal equipment to the limited range of action of the present train air signals. These limitations are well known to all trainmen, and the enginemen in the cab often get false signals that are, to say the least, disconcerting. A system which eliminates all the bad features of the present system and permits of communicating back from the locomotive cab, was described in a paper by L. M. Armstrong of the Pennsylvania Railroad at the recent air brake convention and reported in the *Railway Age Gazette* Mechanical Edition for June. It is called the electro-pneumatic signal system and is very similar to that used on multiple unit suburban cars on electric roads. Air is used to actuate the whistle, but the operating valve is controlled by an electric magnet, wires being connected between the cars instead of the signal hose. By placing whistles on each car, taking the air directly from the train pipe, it is possible for the engineman to signal back to the train crew the acceptance of signals instead of blowing the steam whistle, which oftentimes cannot be heard from the rear of the train.

The Most Trying Time Is Past

President Barnum did not exaggerate when he said in his address that the past year had been the most trying the railway managements have had to go through. The veteran president of one of the largest western systems recently remarked in a private conversation that he did not believe that he was physically or mentally capable of going through another such period of retrenchment combined with all the other troubles that have been besetting railway managements. It is notable, however, that the hopeful view of the business situation expressed in the *Daily Railway Age Gazette* yesterday harmonizes with what is beginning to be said by well-informed publications throughout the country. Referring especially to the June crop report, the New York Times said yesterday in an editorial: "It is unfashionable to be hopeful these days, but it takes invincible resolution to resist such incitements to optimism as these figures." In its financial column the same paper said: "The depressed state of trade at the moment is being viewed with much less concern than lately was being expressed in many quarters, and this fact is largely due to the belief which is steadily gaining ground that the turn for the better is now not very far off. This attitude is not based on any disposition to ignore the plain facts of the commercial and industrial situation, but on the evidence which is afforded by crop reports and other favorable influences, that factors are at work which hold the promise of real improvement." There may be some trying days ahead yet, but if the state and national governments will only give business some show a great and early improvement in all lines of commerce and industry is inevitable.

THE SURCHARGE IN CAR REPAIRS

PRESIDENT BARNUM'S suggestion, in his address yesterday morning, that a greater percentage be added to the cost of labor in billing for car repairs in order properly to cover the overhead expense, or burden, or surcharge, as it is variously termed in the manufacturing world, is deserving of much consideration on the part of railway mechanical department officers. This is probably the first time that any reference has been made to it in a presidential address before the railway mechanical conventions. Railways are often said in an offhand way not to be in the manufacturing business. As a matter of fact they do manufacture a large amount of material in their own shops and often in direct competition with the manufacturers of railway supplies; then, too, in repairing freight cars for foreign roads the work must be considered on practically the same basis. In the old days it was not uncommon when a supplyman called on a superintendent of motive power, and made him a price on certain articles which the road was making, to have the railway officer call up his shop superintendent and ask for the cost of labor and material on the article in question. To this he would add 5 or 10 per cent. to cover the overhead expense and would then decide the question of whether he would continue to manufacture or to buy from outside sources on this basis. Sometimes he might add as much as 25 per cent., but never as much as 65 per cent. or more, a figure which is now commonly used on some roads.

C. J. Morrison, when he was with the Santa Fe ten years ago, or more, was one of the first to start an agitation of this question. To the American Engineer, now the Mechanical Edition of the Railway Age Gazette, he contributed several articles forcibly drawing attention to the necessity for greater consideration of this problem. Since that time much has been published in he columns of the engineering journals, and several papers and reports have been presented before engineering societies on the surcharge problem, and yet only a comparatively few roads are giving it any very great amount of attention. The obvious unfairness to a road, which repairs a larger number of foreign cars than the number of its cars which is repaired by its neighbors, of using too low a percentage for overhead expense, promises to cause a thorough study and investigation of this subject as far as the car department is concerned.

CAR WHEELS

THE car wheel report reads, this year, almost like a perfunctory document. There are a few recommendations tending towards improvement of inspection, a few corrections of mistakes, and that is about all. The recommendation as to increasing the number of standard diameters of steel-tired wheels, is probably the most perfunctory thing about it. It is all well enough to have such standards, but few roads are troubling themselves very much about the future of the steel-tired wheel. So the new diameters can be set down as an ornament to the standards rather than of any real use.

If the wheel committee gets the information it is after, in its recent circular, and can analyze it for next year's report, it will be able to make a contribution to car wheel literature that has rarely been equaled. It wants complete reports of all wheels that have broken in fair service for one year; reports rendered monthly or quarterly as the renderers may see fit, but rendered. Then it can say, with some approximation to accuracy, what should be done in the car flange and guard rail controversy. But to do this it must have data and lots of it.

The committee wants records from thousands and hundreds of thousands of cars; from all sorts and conditions of wheels; of all makes; in all kinds of service, from the rough spur in the mountains to the best trunk line truck; from the north and south; from service in winter and summer. And every car builder in the country should conscientiously give every scrap of information available to help the committee to reach a proper conclusion. He should give it from the most selfish of motives, if for nothing else. One swallow cannot make a summer, and this problem of car wheel breakage is so complex in its ramifications and interconnections that nothing but a broad perspective, covering an immense mass of detail information, will make it possible to reach correct conclusions. Hence, each individual car builder should answer the requests of this circular with all the minutiæ of detail of which he is capable.

TO-DAY'S PROGRAM

M. C. B. ASSOCIATION

Discussion of reports on:

Coupler and draft equipment	9.30 A. M. to 10.30 A. M.
Safety appliances	10.30 A. M. to 10.45 A. M.
Rules for loading materials.....	10.45 A. M. to 11.15 A. M.
Overhead inspection	11.15 A. M. to 11.30 A. M.
Interline inspection	11.30 A. M. to 11.40 A. M.
Car trucks	11.40 A. M. to 12.30 P. M.
Train lighting and equipment.....	12.30 P. M. to 1.00 P. M.
Tank cars	1.00 P. M. to 1.30 P. M.

ENTERTAINMENT

10.30 A. M.—*Orchestral Band Concert.* Entrance Hall, Million Dollar Pier.

3.30 P. M.—*Orchestral Band Concert and Tea.* Entrance Hall, Million Dollar Pier.

9.30 P. M.—*Informal Dance, special feature dancing,* by Mr. Evans and Miss Wynn. Entrance Hall, Million Dollar Pier.

RAILWAY ELECTRICAL ENGINEERS' MEETING

The seventh semi-annual meeting of the Association of Railway Electrical Engineers will be held at the Hotel Dennis on Friday, June 12, at 9.30 a. m.

The program of the meeting is as follows: Consideration of minutes of last meeting; address of president; report of secretary-treasurer; unfinished business; new business; reports of standing committees; report of special committee; and miscellaneous business.

TRANSPORTATION COMMITTEE ANNOUNCEMENTS

The transportation committee announces that a roller chair station has been established at the Traymore Hotel. This is in addition to the stations at the Marlborough-Blenheim, Chalfonte, Strand and the Million Dollar Pier.

George H. Porter, the chairman of the transportation committee, requests that the members of his committee meet at the entrance to the Pier on Friday at 12 o'clock sharp. This is in order that the committee may have a group picture taken and consider certain other important matters.

SPECIAL TRAINS HOME

For several years it has been the practice to run special trains to Atlantic City from New York and Chicago at the opening of the conventions. It is planned this year to do the same thing at the close of the Master Mechanics' convention next week. Last year many home-goers were inconvenienced because of the difficulty in getting accommodations. This year this may be overcome if you leave your name and the time you expect to leave at the Information Bureau. On the last two days of the meeting representatives of the Pennsylvania and the Philadelphia & Reading will be in attendance at the Information Bureau and will look after reservations, etc. If enough passengers make reservations in advance special trains will be run to both New York and Chicago. The Transportation Committee under the leadership of George H. Porter is working hard to make this new move a big success. You can help by giving them early notice as to your time of leaving.

The following notice from J. T. Wallis and D. F. Crawford of the Pennsylvania was read at the opening session of the convention yesterday:

"Kindly notify the railroad members of the Master Car Builders' and Master Mechanics' Association, desiring transportation home over the lines of the Pennsylvania Railroad Company or the Pennsylvania Lines West of Pittsburgh, that such transportation will be provided if they hand their requests to you. In accordance with the requirements of the law, this transportation must be limited to bona fide railroad officials only, and cannot include members of boat lines, car lines, or switching roads operated by industries."

A formal vote of thanks was extended to the Pennsylvania, the Central of New Jersey and the Reading for their kindness and courtesy in providing special trains and transportation.

MR. BARNUM'S GAVEL

A car repairman at Kansas City sent Secretary Taylor a gavel with a letter from which the following is extracted: "You will find under another cover a box containing a small souvenir which I wish you to present to the M. C. B. Association. It can be used as a gavel and represents one of the great matters which is being considered before the Association. It is from a car man, or a common car whacker, but one who is always interested in the changes that are made at the conventions."

In accepting the gavel President Barnum said: "I consider the presentation of this gavel a very fine tribute to the Master Car Builders' Association. It represents the interest of the man who is right next to those who, so to speak, are doing the daily work of repairs on our cars, and their interest is what is needed more than anything else today to make a success, in every possible respect, of the maintenance of the equipment on our railroads in the best possible manner and at the least possible expense.

SOCIETY OF RAILWAY CLUB SECRETARIES

The annual meeting of the Society of Railway Club Secretaries will be held at the Marlborough-Blenheim on Saturday morning at 10 o'clock.

CORNELL DINNER

The Cornell dinner will be held at Barnay's, Kentucky avenue and the boardwalk, on Friday evening, June 12, at 7:30 P. M. All Cornell men who can attend are asked to notify some member of the committee by noon on Friday.

The committee consists of Charles P. Storer, Marlborough-Blenheim; E. A. Averill, Space 211, Million Dollar Pier; A. S. Lewis, Marlborough-Blenheim.

A telegram has been sent to Jack Moakley asking him to be present. Professor Kimball, of Sibley, will speak at the dinner.

NORTH WESTERN CLUB

Arrangements have been made for luncheon at 1 p. m. on Saturday, June 13, at Barnay's, Kentucky Avenue and the Boardwalk. This will be the first annual luncheon of the North Western Club, and it is hoped that all employees and former employees of the Chicago & North Western who are in Atlantic City will be present and renew old acquaintances.

EXHIBIT OF COMMITTEE ON CAR TRUCKS

A 140,000 lb. capacity freight car truck has been built by the Pennsylvania Railroad for the Master Car Builders' committee on Car Trucks, and is being exhibited on the Pennsylvania tracks near the boardwalk. Trucks of the same design are also under the Pennsylvania steel box car which stands near the 140,000 lb. capacity truck. This car is also equipped with experimental standard M. C. B. couplers, Type A on one end and Type B on the other.

The bolster is a design which the committee has worked out in detail, and will recommend for adoption by the association as

standard. It is cast steel and is equipped with an M. C. B. standard center plate.

The side frames are cast steel and are designed to conform to the limiting dimensions and specifications which the committee recommends.

The springs under each end of the bolster consist of five double coils, which conform in detail to the present M. C. B. standard for 80,000 lb. and 100,000 lb. trucks. The number and arrangement of the coils is as recommended by the car truck committee.

The brake beam is a new design recommended by the committee on brake shoes and brake beam equipment.

The truck is equipppd with wrought steel wheels, mounted on axles having 6 in. x 11 in. journals. These parts, together with the complete journal box all conform to M. C. B. standards.

The committee has worked out similar designs for 80,000 lb. and 100,000 lb. capacity trucks. It is to be commended for the care it has taken to supplement its report to the association in this manner, and all members should make it a point to visit the exhibit.

PULLMAN CAR FOR FRANCE

The International Sleeping Car Company, of Europe, has ordered from the Pullman Company one sample all-steel sleeping car. It will measure about 20 feet less in length than the standard American Pullman sleeper and will have eight compartments and sixteen berths. Each compartment will have an enclosed lavatory. The car is to be delivered about the close of 1914 or early in 1915, and will be first used in France.

LOST

Badge 2889 has been lost by F. O. Paige. Its return to him at booth 37, The Bird-Archer Company, will be very greatly appreciated.

LITTLE INTERVIEWS

E. B. Leigh, president of the Chicago Railway Equipment Company, shares the belief that the turn in business is about here, and that conditions will soon show a marked improvement.

"The railway business cannot fail to be improved if the present crop prospects are realized," said Mr. Leigh. "There will be still more improvement if the roads get some advances in freight rates and government regulation becomes in other respects more rational. If the railways make more money they will spend more, and the effects of that will be felt in all lines of business. The railways are the largest customers of the iron and steel manufacturers, buying probably 50 per cent. of all their product. If, therefore, the railways increase their purchases, the iron and steel trade will get better rapidly; and the condition of the iron and steel trade is both the barometer that marks, and one of the chief factors in determining, the condition of business in general.

"One of the main troubles with business is the attitude of the administration and Congress. I don't believe people generally realize how serious are the proposals being made for anti-trust legislation. If Congress could only be adjourned for eight years conditions probably would soon get a great deal better."

"I am sorry President Wilson has dragged the word 'Psychological' into the limelight again," remarked one well-known supplyman yesterday. "The reason why is this: I have a friend who is a combination of a rich man, a poet and a sailor. Naturally such a combination as that would evolve a name for a boat which would be, as the ad writers say, different. He calls his yacht the Psyche. One day last summer he put into a small harbor in Maine where all the old inhabitants of the male persuasion were ex-seamen. Among them the fine lines of a craft would find the keenest appreciation. One old salt looked the boat over critically. He spelled the name letter by letter P-s-y-c-h-e. Then he shook his head in disgust and said: 'Well, that is a h—l of a way to spell fish.' Since that time when I hear an argument with the words 'Psychological' or 'Psychology' mixed up in it it always sounds fishy to me."

Asked for an expression of opinion as to the training of employees for the car department, George M. Basford, who has done such splendid work in inspiring the mechanical departments of our railroads to give more attention to the development and training of young men, and who presented a comprehensive and valuable paper on the subject at the January meeting of the New England Railroad Club, said:

"The problem is such a tremendously important one, and there is so much to it, that it is impossible to answer your question off hand.

"Every railroad organization ought to have on its staff a man with the title of assistant to the president with sufficient authority to put into effect any instructions which he may find it advisable to give, and should have entire charge of the problem of selecting, training and promoting men, whether the promotions are inside of the department or outside and above it.

"One reason why the railroads have had so much trouble with the labor problem and in developing the organization is because of the lack of a systematic scheme of promoting capable men. Not nearly as much attention has been given to the man problem as to that of methods and materials, although the former is of far greater importance than the latter."

Mr. Basford was recently asked to appear before the commission on industrial relations which was appointed by President Wilson to investigate the possibilities of developing a better understanding between employers and employees. Among the members of this commission are F. A. Delano, president of the Wabash Railroad, and A. B. Garrettson, the head of the Order of Railway Conductors.

R. B. Stout, mechanical efficiency expert of the Southern Pacific, with offices in San Francisco, but "on the road" most of the time, did not attend the conventions last year, but is here this year. Mr. Stout has been connected with the mechanical departments of several western roads, gradually advancing from a humble position with the D. & R. G. to the important office he now holds. He is a Pacific coast "booster" of the most pronounced type and his particular admiration is for the growing city of Portland. In an interview he said: "Naturally, we would like to have as our guests next year the M. C. B. and M. M. conventions, and we would be additionally pleased to have with us the Railway Supply Manufacturers' Association and the splendid exhibition of railway appliances we see each year at Atlantic City. San Francisco and the World's Exposition wants this fine body of men and the product they sell. We will make every inducement to prevail upon you to come to the western coast. But the idea has occurred to me and to other western railway men of having the M. C. B. and M. M. conventions held next year in June in the city of Portland. We could all go there, have our meetings without the distractions that we would have in San Francisco, make the usual exhibit of railway devices in connection with the conventions, or not, as would be found advisable, and then, when our work was finished, all go down to San Francisco and thoroughly, and without any convention restraints, see the great exposition there. I believe the suggestion well worth consideration and I would be pleased to confer with the officers and members of the railway and supply associations further on the subject."

Master Car Builders' Association Proceedings

Reports on Revision of Standards, Train Brake and Signal Equipment, Car Wheels and Rules of Interchange

The first session of the forty-eighth annual meeting of the Master Car Builders' Association was held in the Greek Temple on Young's Million Dollar Pier, Atlantic City, N. J., on Wednesday, June 10, 1914.

The president, M. K. Barnum, of the Baltimore & Ohio, called the meeting to order at 9.40 a. m. Reverend Dr. W. Spurgeon, of the Olivet Presbyterian Church, of Atlantic City, delivered the divine invocation.

Address of President Barnum

In opening this, the forty-eighth annual convention of the Master Car Builders' Association, I wish to congratulate the members upon the activity and healthy growth of the association. The work of the committees and of the secretary has increased so much that new and larger offices became an imperative need, and satisfactory quarters were secured last fall in the Karpen Building, 900 South Michigan Avenue, Chicago, where you will all be cordially welcomed whenever you visit the Windy City.

M. K. Barnum
President, M. C. B. Association

D. F. Crawford
Vice-President, M. C. B. Association

The past year has been probably the most trying on record for railroad managements in the United States, as the narrowing margin between gross earnings and expenses has compelled every official to spend most of his time studying new ways of economizing and reducing expenses without allowing deterioration in the physical condition of the property or in the quality of the service. Working under these adverse circumstances I believe that most of you who are responsible for the equipment have obtained very creditable results but some of the problems ahead will be more difficult to solve than any yet encountered.

One of the most important and difficult matters confronting us is the proper application and maintenance of safety appliances to conform with the Federal law and with the orders of the Interstate Commerce Commission. The data available indicates that some roads have not been equipping freight cars with safety appliances as rapidly as they must to finish the work within the time limit, or before July 1, 1916, and I wish to impress upon every one the importance of following up this part of the work as vigorously as possible. As there are over 250 different items on a freight car which may constitute a violation of the safety appliance law, it requires careful study to become familiar with them all, and it is very essential that a campaign of education be systematically pursued with car foremen, inspectors and repairmen so that they will know accurately just what the law requires with regard to each part. Every company should have a man on the mechanical department staff specially qualified and trained to follow up safety appliances and to act as the authority on this subject. There should also be at every shop one or more inspectors detailed to instruct and check up those who are employed in applying and repairing safety appliances.

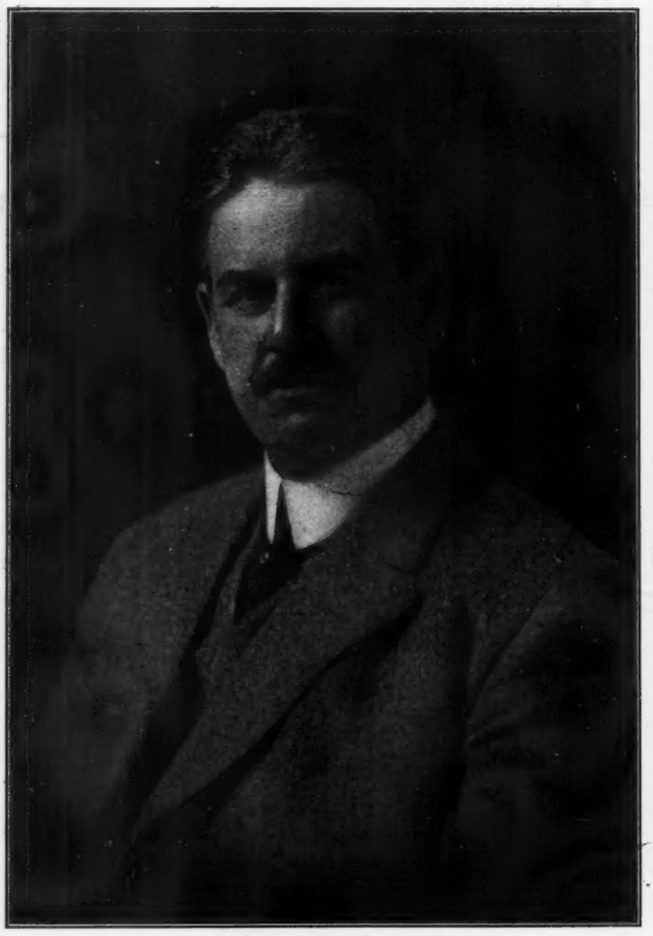
Too much emphasis cannot be placed on the importance of maintaining correctly all details of cars which have once been fully equipped with safety appliances, and in making partial repairs to cars which have not been equipped, it is good practice to make the same in accordance with the law which must ultimately be complied with in full. In cases of doubt as to the exact interpretation of the law it will usually prove a safe guide if we consider why it was made and what was its intent.

Another important matter to be considered is the adding

of a sufficient percentage to the labor shown on bills for car repairs to fully cover all overhead expenses, including upkeep of the plant, taxes, insurance, etc. Companies which build and repair cars usually add from 65 per cent to 80 per cent for overhead expenses and there is reason to believe that railroads may be expected in the future to handle such matters on a manufacturing basis.

The growing importance of the M.C.B. Rules of interchange has necessitated an extra afternoon session especially for the discussion of the changes which have been recommended. In revising the Rules of Interchange it has been the aim of the Arbitration Committee to reduce as far as possible the unprofitable movement of cars and material and also to simplify the wording and application of the rules. Some of the members have suggested that the rules ought to be renumbered and rearranged in a more logical order and also that they be continued in force for at least two years without any change.

The first suggestion should be followed in revising the rules for the 1915 Convention, but the Arbitration Committee has not thought best to adopt it this year. The large number of suggestions for changes in the rules each year seem to indicate a necessity for their yearly revision, but



D. R. MacBain
Vice-President, M. C. B. Association and President, M. M. Association

after the revision proposed for 1915, it may be well to try them for two years without change.

Some members have recommended eliminating all the rules covering combinations of defects which are supposed to indicate unfair usage, viz.: rules 37 to 43 inclusive. Some of the arguments for doing this are that the present rules tend to penalize those companies which build strong cars and to unduly favor those having weak cars, also that no satisfactory basis has been found for combinations in all-steel and steel underframe cars. While conceding these points the Arbitration Committee has not thought that the time was ripe for the elimination of all combinations.

On account of numerous questions received by the Secretary the Arbitration Committee has sent out to the members interpretations of those rules which are not clearly understood and it may be well to have a formal expression from the members as to continuing the issuing of such interpretations.

Many freight cars originally of wood construction are being practically rebuilt and strengthened with steel underframes, friction draft gear, steel ends, new roofs, new siding, etc., so that they are stronger and better than when first built and their ultimate life will be prolonged probably fifteen or twenty years. These improvements usually cost from $250.00 to $400.00 per car, a part of which is properly chargeable to capital account, and it seems only fair that some allowance should be made for them in figuring the depreciation when such cars are destroyed and that those companies which are spending such large amounts to strengthen their cars should not be penalized for so doing, as at present. This subject is of sufficient importance to justify appointing a special committee to study and report upon it at the next convention.

While it might be possible to adopt standards for so many items that improvements in design would be discouraged, I believe that the M. C. B. Association has not carried standardization as far as it can profitably for its members. The committees on car construction and on car trucks have

R. W. Burnett
Vice-President, M. C. B. Association

done something toward standardization and the committee on specifications has done a large amount of valuable work which is submitted in its report for your consideration. Some parts that might be standardized are brake beams, journal boxes for pedestal type freight car trucks, and spring planks for steel side-frame trucks.

The Coupler Committee has continued its good work and has reduced the number to two, which they recommend for extensive tests in service, so the prospects of soon having one standard M. C. B. coupler are very good.

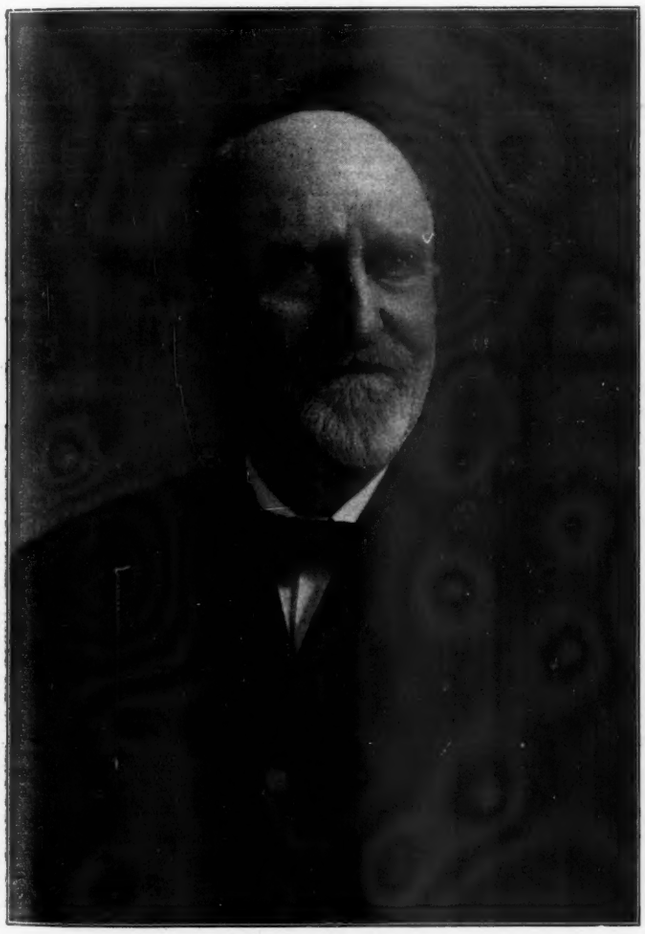
It would also be a great benefit if standards could be adopted for the principal dimensions of 40-ft. and 50-ft. freight cars. Some years ago the American Railway Association decided upon a standard 36-ft. box car, but almost immediately the traffic departments began to ask for a variety of different sizes, and today very few roads build the stand-

ard 36-ft. car. The committee on retirement of 40,000 to 50,000 pounds capacity freight cars has presented a definite recommendation which will help to improve the situation if adopted, and it will undoubtedly bring out a full discussion.

There should be more standards for passenger car parts and these need not specify all details, but should cover those features which affect interchangeability.

The building of new wooden passenger cars was practically stopped a year or more ago and most roads are applying steel underframes and ends to the older cars as fast as money can be obtained for the work, with the result that there are now 3,566 less wooden passenger cars in service than there were two years ago, so with the general use of steam heat and electric lights passenger travel on steam railroads is steadily growing safer. The fact that in 1912 the number of passengers killed in train accidents was only one for each 251,000,000 passenger miles, has enabled insurance companies to pay double and triple indemnities for such accidents, and, as stated before, the conditions are steadily improving.

Our conventions always depend largely for their attrac-



J. S. Lentz
Treasurer, M. C. B. Association

J. W. Taylor
Secretary, M. C. B. Association and M. M. Association

tiveness and social enjoyment upon the presence of the ladies and I wish to extend to them a most cordial welcome and the thanks of the M. C. B. Association for their aid in making this occasion a complete success.

I have always felt that one of the principal benefits to be derived from attending these conventions is the excellent opportunity afforded to study the railway appliances and materials which are so well arranged and so cheerfully explained by our friends, the supplymen, and it hardly seems necessary to urge you all to give the present instructive display of exhibits which amounts almost to a railway exposition, all the time and attention which their great merit deserves.

ASSOCIATION BUSINESS.

Secretary Taylor presented his report which showed the membership to be as follows: Active members, 422; representative members, 436; associate members, 13; and life members, 20; making a total of 891.

The number of cars represented in the Association is 2,785,894, as compared with 2,713,656 for June, 1913, showing an increase of 72,238. The report of the treasurer shows a balance in the treasury of $627.91. The report of the secretary and treasurer was referred to an auditing committee consisting of T. J. Burns, M. C.; F. H. Clark, B. & O.; and E. W. Pratt, C. & N. W.

The Secretary: At a meeting of the executive committee held last evening it was recommended that the dues of representative members be increased to $7 per vote, the dues of active and associate members to remain as at present, $5 per vote.

(It was moved, carried that the Association concur in the recommendation.)

REPORT OF THE COMMITTEE ON NOMINATIONS

The committee suggested the following: *For President,* D. F. Crawford, G. S. M. P., Penna. Lines West; *for First Vice-President,* D. R. MacBain, S. M. P., L. S. & M. S.; *for Second Vice-President,* R. W. Burnett, G. M. C. B., Canadian Pacific; *for Third Vice-President,* C. E. Chambers, S. M. P., C. R. R. of N. J.; *for Treasurer,* J. S. Lentz, M. C. B., Lehigh Valley; *for Executive Members,* J. C. Fritts, M. C. B., D. L. & W.; R. E. Smith, G. S. M. P., Atlantic Coast Line; and H. T. Bentley, S. M. P. & M., C. & N. W.

The balloting will take place on Friday morning.

REVISION OF STANDARDS AND RECOMMENDED PRACTICE

After due consideration of present standards and recommended practices of the Association, together with replies from members to the circular of inquiry, also requests involving standards presented through the secretary, the committee respectfully submits the following report:

[EDITOR'S NOTE:—In abstracting the report we have left out several items referring to corrections on the drawing plates

which the committee concurred in and referred to the secretary for action; also several paragraphs referring to suggestions which did not meet with the approval of the committee or were of minor importance and were referred to other committees or otherwise disposed of.]

JOURNAL-BEARING WEDGE (STANDARD)
Pages 826-829.
For Journals, 3¾ in. by 7 in. Sheet M. C. B. 3.
For Journals, 4¼ in. by 8 in. Sheet M. C. B. 6.
For Journals, 5 in. by 9 in. Sheet M. C. B. 9.
For Journals, 5½ in. by 10 in. Sheet M. C. B. 12.

A member calls attention to journal-bearing wedge, with recommendation that the solid wedge only be made M. C. B. standard.

The committee does not concur in the recommendation, as it refers to the 3¾ in. by 7 in. and 4¼ in. by 8 in., but does concur as regards the 5 in. by 9 in. and 5½ in. by 10 in., and suggests the elimination of note from Sheets 9 and 12 permitting the skeleton wedge.

SAFETY APPLIANCES—FREIGHT-TRAIN CARS (STANDARD)
Pages 908-935. Sheets M. C. B. 19 and 19-A to 19-P.

A members calls attention to the brake chains as shown on Plate A, M C. B. Sheets 19-A and 23-A, and suggests that Plate 19-A be again revised, omitting the dimensions, showing the

T. H. Goodnow
Chairman, Committee on Revision of Standards and Recommended Practice

length of the link, and the words "7-16-in. minimum and ½ in. preferable" should be added to denote the size of material of the enlarged link.

The committee does not concur in this recommendation, but does recommend that on Sheet 19-A the word "preferable" be omitted opposite the dimension "7-16 in.," and also, "⅜-in. minimum" be omitted for brake chain.

CENTER PLATES (STANDARD)
Pages 935. Sheet M. C. B. 20.

A member suggests that the Association adopt standard top and bottom center plates for each capacity car. The committee does not concur in this recommendation.

A member calls attention to the clearance between the body and truck center plates, which is ⅛ in., and suggests that this clearance be increased to ¼ in. The committee does not concur in the recommendation.

AUTOMATIC COUPLER YOKE (STANDARD)
Page 942. Sheet M. C. B. 23-A.

A member suggests that the rear of coupler yoke be changed to be formed with ⅞ in. radius at inside corners and fitted with 1 in. filler block, wrought iron or steel, having 1-in. radius ends, the same to be riveted to back end of pocket with 1¾-in. countersunk rivet. The committee concurs in this recommendation.

SIGNAL-LAMP SOCKET (STANDARD)
Page 956. Sheet M. C. B. 26.

Referring the action of the 1912 and 1913 conventions, in regard to standard location, after fully considering same.

The committee recommends that this be 9 ft. 6 in. approximately from top of rail to bottom of slot, and so located that the axis of the socket is 45 deg. with center line of car. This in view of the clearances of railroads, size of markers and lens, etc., which are at such variances that it is not practicable to establish a fixed location transversely.

LOADING RULES (STANDARD)
Pages 967-1040.

Letter of General Managers' Association of the Southeast, as follows: "We have before us copy of your Circular No. 22 to your members, requesting suggestions for revision of Standards and for Recommended Practices.

"We are profoundly impressed with the necessity for devising standard practices to govern the interline loading of commodities, and while we are not entirely sure that yours is altogether the proper Association to work this out, but certainly you are very closely connected therewith, through the fact that you already have a set of rules governing long materials, etc.; great damage is being caused to side doors of box cars by improper loading, etc.

"If your Association could take hold of this question it would result in a great alleviation of the loss and damage evil."

The committee refers this to the Committee on Loading Rules.

JOURNAL BOX AND DETAILS (RECOMMENDED PRACTICE)
Page 829. Sheet M. C. B.—A-2.

A member recommends that the journal-box lid key for 6 in. by 11 in. box be the same as for the 5½ by 10 in. The committee concurs in this recommendation.

JOURNAL BOX AND DETAILS (RECOMMENDED PRACTICE)
Page 829. Sheet M. C. B.—A, A-1 and A-2.

A member suggests that journal box, bearing, wedge and lid for 6 in. by 11 in. journal be advanced to Standard. The committee concurs in the recommendation.

JOURNAL BEARING AND WEDGE GAGES (RECOMMENDED PRACTICE)
Page 830. Sheet M. C. B.—A-3.

A member suggests that journal bearing and wedge gages, also dust guard for 6 in. by 11 in. journal, be advanced to Standard. The committee concurs in the recommendation.

JOURNAL BOX AND DETAILS (RECOMMENDED PRACTICE)
Page 829. Sheet M. C. B.—A-1.

A member suggests that reference in first paragraph as to material of which it is made, to be changed to read: "Material may be pressed steel or cast steel," eliminating "cast or malleable iron." The committee does not concur in this recommendation.

END FOR HOPPER-DOOR OPERATING SHAFT (RECOMMENDED PRACTICE)
Page 967. Sheet M. C. B.—F.

A member suggests that this be advanced to Standard. The committee concurs in this recommendation.

CAST-IRON WHEELS (RECOMMENDED PRACTICE)
Pages 841-844. Sheet M. C. B.—O.

A member suggests that the dimension from point where 11-16 in. radius is struck and center line of flange should show 1¼ in., which is now left blank, also that it would be advantageous to continue the practice of having maximum and minimum weight of wheels shown on this plate. The committee refers this to the Committee on Car Wheels.

CAST-IRON WHEELS (RECOMMENDED PRACTICE)
Page 841. Sheet P.

A member calls attention that the dimensions giving the thickness of metal was omitted at the end of the 3 29-32 in. radius, also that it would be to advantage to continue practice of having the maximum and minimum weight of wheels shown on this plate. The committee refers this to the Committee on Car Wheels.

AIR-BRAKE APPLIANCES (RECOMMENDED PRACTICE)
Pages 898-899. Sheet M. C. B.—Q.

A member suggests that size of cylinders and style of triple valves, adopted as Recommended Practice in 1913, be advanced to Standard. The committee concurs in this recommendation for all cars built after January 1, 1915, for 10-in. air-brake cylinders for freight cars weighing between 37,000 lb. and 58,000 lb. light weight and triples K-1 and 8in. and K2 for 10-in. equipment.

LOCATION OF LABEL ON AIR-BRAKE HOSE (RECOMMENDED PRACTICE)
Sheet M. C. B.—Q.

A member suggests that the position of the bolting lugs of air-brake hose at coupling and at nipple end also location of air-

brake hose label be advanced to Standard. The committee concurs in this recommendation.

STEAM HOSE, SPECIFICATIONS FOR (RECOMMENDED PRACTICE)
Pages 1056-1059.

A member calls attention to specifications for steam hose and suggests that there be introduced the condition that the hose in test be subjected to 45 lb. pressure for 48 hours; also that the test after steaming should not be made until twelve hours have elapsed. The committee refers this to the Committee on Specifications for Test of Materials.

DIAMETER OF STEEL AND STEEL-TIRED WHEELS (RECOMMENDED PRACTICE)
Page 846.

A member suggests that the diameter of steel and steel-tired wheels be advanced to Standard. The committee concurs in this recommendation for 33-in. 36-in. and 38-in. diameters.

A member calls attention to the necessity of bringing about some action that will provide for the application of a device for preventing brake beams falling on the track, due to failure of brake hangers, preferably by the application of safety straps to the truck-spring plank. The committee refers this to the Committee on Car Trucks.

NEW SUBJECT

A member calls attention to the index of the M. C. B. Proceedings, suggesting that it requires thorough revision and that the subject should be taken in hand and arrange to prepare a more suitable index. Your committee concurs and secretary is instructed to do this, which will require a more elaborate index.

The report is signed by:—T. H. Goodnow, (C. & N. W.), chairman; W. H. V. Rosing, (St. L. & S. F.); C. E. Fuller, (U. P.); T. M. Ramsdell, (O. W. R. & N.); O. C. Cromwell, (B. & O.); O. J. Parks, Penna.), and F. F. Gaines, (C. of Ga.).

DISCUSSION.

Mr. Goodnow (C. & N. W.): Since this report was written, one of the roads has called attention to the steam hose label which is shown in the Proceedings of last year. The steam hose committee practically adopted the same label as was shown for the air brake hose, including the word "copyrighted" on that label, and one of the roads purchasing the steam hose raised the question as to whether the label was right or not. There was no action taken to copyright the steam hose label, and it was not clear to the committee whether that label should be used in its present form, but it has been included just as it was shown in the report, although there is no mention made in any place of the copyrighting of that label. In the copyrighting of the air brake hose label, it would be given to the manufacturers only who made hose under the specifications of the M. C. B., and that it would be used on such hose exclusively. The manufacturer would have to receive authority from the Association to use the label at all, if the word "copyright" is on it.

"The Secretary: In regard to the copyright of the air brake hose label, I have taken this matter up with a prominent patent attorney in New York, and he advises that, as an association, we cannot get a copyright. We are not incorporated. He advises, however, that we can get a trademark, and an application for trademark is now on file in the Patent Office.

E. W. Pratt (C. &. N. W.): I move that when this trademark is obtained that the Association grant to manufacturers the authority to apply such trademarks to air brakes hose and steam hose meeting its specifications.

(The motion was seconded).

T. H. Goodnow: Before that motion is put, I would like to say that it does not seem to me that the trademark or copyright label should be used on a steam hose, because a great many roads are not following the M.C.B. specifications for hose. They are getting a better hose, especially for head end service. The idea of the copyright label on the air brake hose is to protect freight cars when they are away from home and to insure that they will have a good hose put on them. The same necessity does not exist in the case of the passenger equipment, and I believe it would be better to adopt the label for the steam hose without any trademark on it on account of the difference in practice of roads in buying steam hose.

F. F. Gaines, (C. of G.): I think you will remove Mr. Goodnow's objection, if the steamhose is made strictly in compliance with the M.C.B. specification. There would be no objection to putting the label on it if it met the specifications whether it is standard or recommended practice. If it is a better grade of hose do not put the label on it.

(Mr. Pratt's motion was then carried).

C. E. Fuller: I have given a good deal of investigation to centre plate troubles and I have found in using the cast steel bolster and the body bolster, and the truck bolster with the plate and centre pin cast integral, that a ⅛ in. clearance is entirely too close. They are not round and the small clearance causes more or less trouble. I feel that it is not necessary to go to the expense of machining these plates which some of us have done in the past and that, to overcome the trouble entirely, without any disadvantage, we should increase the clearance to ¼ in. I move that in the recommendation of the committee referring to centre plates, that the clearance between the body and truck centre plates be increased to ¼ in., and that the matter be submitted to letter ballot.

F. W. Brazier (N. Y. C. & H. R.): It has been my practice to use ⅜ in. clearance, and I certainly stand by Mr. Fuller in his contention that it should not be less than ¼ in. I would rather have it ⅜ in.

R. L. Kleine, (Penn. Lines): As the committee on car trucks has the question of centre plates under consideration, I will amend Mr. Fuller's motion by referring to the question which he has raised on centre plates to that committee.

C. E. Fuller: I think that the reduction should be made in the centre pin and not the centre plate. There are thousands of centre plates in use, and we are renewing more bolsters than plates. I believe it would cause less trouble to continue the size of the centre plate on the truck bolster and decrease the size of the male plate, which will help very materially in the matter of repairs.

E. W. Pratt: If you do decrease the center portion of the male bearing, you are decreasing the pressure per square inch, and some of our bolsters have been so thin that the male plate has gone right through.

C. A. Schroyer (C. & N. W.): We are putting our center plates upside down—the female goes underneath and catches the brunt of the grinding conditions produced by the dust and dirt caught in the center plate. So far as the bearing is concerned on the male portion of the center plate, ⅛ in. reduction or ¼ in. reduction, or even an increase of these amounts, would make no difference in that at all.

R. L. Kleine: If this matter is left to the committee on car trucks, they can take into consideration the remarks made here, and present them in connection with their report, to letter ballot. This could be done so as to get action at this convention.

(The amended motion was carried.)

C. E. Fuller: I fail to see any necessity for stencilling the weight on the end of the car. It costs money to do it, and I doubt very much whether it is used to any very great extent. We have the weight stenciled on each side and I would make a motion that the stenciling of the weight on the end of the box car be eliminated. (The motion was seconded.)

R. L. Kleine: I was a member of the joint committee that fixed the weight stencilling, and it was recommended by the American Railway Association to have the weight stencilled on the end of the car in addition to the sides of the car. The reason is that on scale tracks the lights in the scale house are so trained on the car that when the car comes to the weighman, that he can get the weights stencilled on the end of the car rather than on the side of the car. For that reason the weights have been stencilled on the end of the car for scale tracks and on the side of the car for easy reading by inspectors and others.

J. J. Hennessey: Unless there can be a better reason shown than those talked of here today, I believe that the weights should not be stencilled on the end of the cars. I think the percentage of cars with the weight stencilled on the end is very small and that it is entirely unnecessary.

J. J. Tatum, (B. & O.): We have found that the majority of the railroads, do not stencil the weight on the car ends. We investigated as to what use the weight on the end of the cars would be. We found there was a good deal of divergence of practice in handling the various yards—in some yards they took the weight from the side, and in other yards they took the weight from the end. We also found that it placed the lives of the men in jeopardy when they undertook to read the weights of the cars from the end, and we decided that we would omit the weight on the end of the car.

C. A. Schroyer: There is more in the matter of putting the weights on the ends of the cars than has been mentioned. If you add the weights on the ends of the cars, it necessitates the use of a ladder for the men to get up near to the top of the car to enter the weights, which increases the amount of work to be done to a considerable extent, and very materially increase the liability to making errors in the stenciling of the weights.

E. W. Pratt: I would like to amend the motion that the executive committee consider the remarks which have been

made at this meeting, and that this motion, if it is carried, authorize them to present the matter to the American Railway Association, and to letter ballot it if it can be so arranged.

C. E. Fuller: I will change the wording of my motion to cover the matter more clearly, as follows: That it is the sense of this Associataion that the stenciling of weights on the ends of freight cars is unsafe for employees, and is unnecessary, and further, that it is the unanimous recommendation of this Association, that it should be eliminated. As a matter of courtesy it should be taken up with the American Railway Association, and their views obtained before we act. Lots of roads do not place weights on the end of the car, and lots of cars have the wrong weights. The men going between the cars to restencil the end, which they have to do after they leave the scales, places them in a hazardous position.

S. G. Thompson (P. & R.): Along the lines of unnecessary expense, I would call attention to the lines above and below the letters, which I think are due to the Car Accountants' Association, through the American Railway Association. We are now putting those lines above and below at the request of our management. That is also along the line of extra stenciling, and should be included in this recommendation.

J. J. Tatum, (B. & O.): With all due respect to the American Railway Association, and I know this Association wants to co-operate with them in every way; our railroads have laid down the motto "Safety first," and the M. C. B. Association should make their motto "Safety first" and omit the weight on the end of the car on that account alone, if no other.

(Mr. Fuller's motion was then put and carried).

R. L. Kleine: The reason for the bars below the number and above the initial markings was to distinguish them from the other markings on the car.

T. H. Goodnow: Very few roads are using that line which Mr. Thompson refers to, and it has never been included in the M. C. B. marking. It was considered by the committee on standards in presenting this revised sheet which simply means that whatever initials are assigned to a road they would be placed in the lettering place shown.

C. E. Chambers: The Committee request also that the name of the road in full should be put on in some manner in some place on the car. I would like to know whether it would be objectionable to put the name of the railroad, even with smaller letters, in any form you might choose, somewhere on the car, inasmuch as it will not receive attention as the car was moving through the yards.

T. H. Goodnow: The committee kept in mind this new style of box car. The outside frame reduces the stenciling space on cars, and very greatly interferes with getting the stencils on cars, so that it should be kept to the minimum, as far as possible.

J. S. Sheafe, (B. & O.): Why should we not have solid journal bearings stenciled "solid," and filled bearings stenciled "filled." That would eliminate all dispute and all doubt.

T. H. Goodnow: The committee, in considering that question, thought in the first place that practically everybody was using the solid bearing, and the only way that it can be determined is by the dimensions that are shown on the drawings of the bearings. A great many roads are relining the bearings, and in doing so are reboring them, and they did not know just where they would draw the line. Eventually, with the delining of the bearing, it could become what is considered a filled bearing, under the present specification.

C. E. Fuller: The word "filled" was intended for another proposition entirely. That was a cast shell. It has always been a question in my mind whether this Association wanted to recognize the use of a filled bearing. I believe it has been the intention for the M. C. B. bearing to be a solid bearing.

J. J. Hennessey: It seems to me it would be hardly practical to make journal bearings filled and solid. I think the large roads, as a general thing, are using in their new equipment, solid bearings, and at the same time, the same roads are all refilling these bearings, and reboring them. When new, they are a solid bearing. Now if they refill them once or twice, and take out 1/32-in., it becomes a filled bearing, under the rules. I believe you had better leave that matter as the committee recommended it.

A. La Mar, (Penn. Lines): The committee give an average credit price of so much per pound, either for filled or solid matter Therefore. it is absolutely necessary to make them either filled or solid. They have taken care of it and given an average scrap credit of 12 cents per pound in the new rules this year.

T. H. Clark: I move that the report of the committee, as amended, be approved, and referred to the Association by letter ballot. (The motion was carried.)

TRAIN BRAKE AND SIGNAL EQUIPMENT

The following subjects have been considered by the committee:

BRAKE AND SIGNAL PIPE CLAMPS FOR ENDS OF PASSENGER CARS.

The committee believes that all passenger equipment cars should be equipped with brake and signal pipe end clamp hangers of a swinging or sliding design so that sufficient lateral motion will be provided for the ends to prevent pulling apart of hose couplings.

Those now in use on passenger cars of the Pennsylvania Railroad and of the Baltimore & Ohio are herewith illustrated

R. B. Kendig
Chairman, Committee on Train Brake and Signal Equipment

in Figs. 1 and 2. The swinging pipe hanger in use on the New York Central Lines will be found illustrated at page 88 of Part 1, of the 1913 report of proceedings. [*Daily Railway Age Gazette*, June 17, 1913, page 1435.]

CONDUCTOR'S VALVE.

The conductor's valve being an important emergency device, due consideration was given to the merits of various types of these valves with a view to selecting for adoption that which appeared to possess the greater merit, the type selected, known

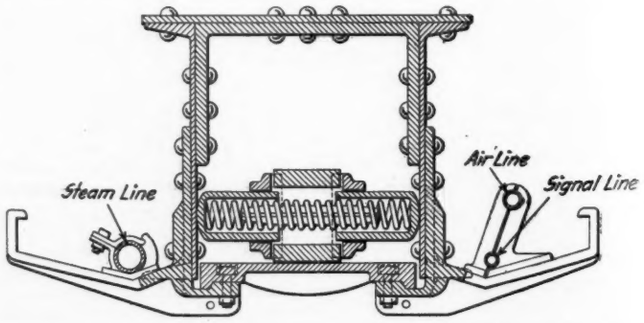


Fig. 1—Flexible Pipe Clamps Used by the Pennsylvania Railroad

as the B-3-A*, the committee recommends. It is of the check valve type, rubber seated and is not self-closing.

CORDING CONDUCTOR'S VALVES.

Whenever permissible in passenger carrying cars, the committee recommends that conductor's valves be corded the entire length. Where this can not be done, as is generally the case in dining, buffet, and certain classes of load carrying cars, the committee recommends that two conductor's valves be installed, one at each end of the car, and that each be corded into the car

*This valve is made by the Westinghouse Air Brake Company—Editor.

a distance necessary, including platforms, to permit of easy access.

To prevent delay or confusion in getting hold of the right cord to operate the conductor's and signal valves, the committee recommends that the conductor's valve cord be of red, and the signal-valve cord be of gray color; also, that the cords be made of metallic material; that is, either of wire or of chain, the committee's preference being chain for the conductor's valve, and hemp or cotton covered wire for the signal valve.

CLASP BRAKES FOR PASSENGER EQUIPMENT CARS.

The committee desires to keep before the Association the clasp type of truck-brake rigging for passenger-equipment cars on account of the superior merits and higher degree of efficiency of this type, and because it is apparent that the single-shoe type of truck-brake gear does not come up to requirements on modern steel-car equipment. The committee recommends that a special committee be appointed to make investigations with a view to making a general determination of the relative merits of different designs of clasp brakes. Also that this committee make investigations with a view of finding a more satisfactory design of hand-brake rigging.

NEW TRAIN SIGNAL SYSTEM.

On account of the limited range of action of the present train air-signal, the committee desired to bring to the Association's attention the need of an improved train signal—this with a view of accelerating the development of a signal device which shall be entirely satisfactory in its operation, such signal to permit of easy and prompt communication both between the train crew and engineman, and the engineman and train crew, under all conditions of service.

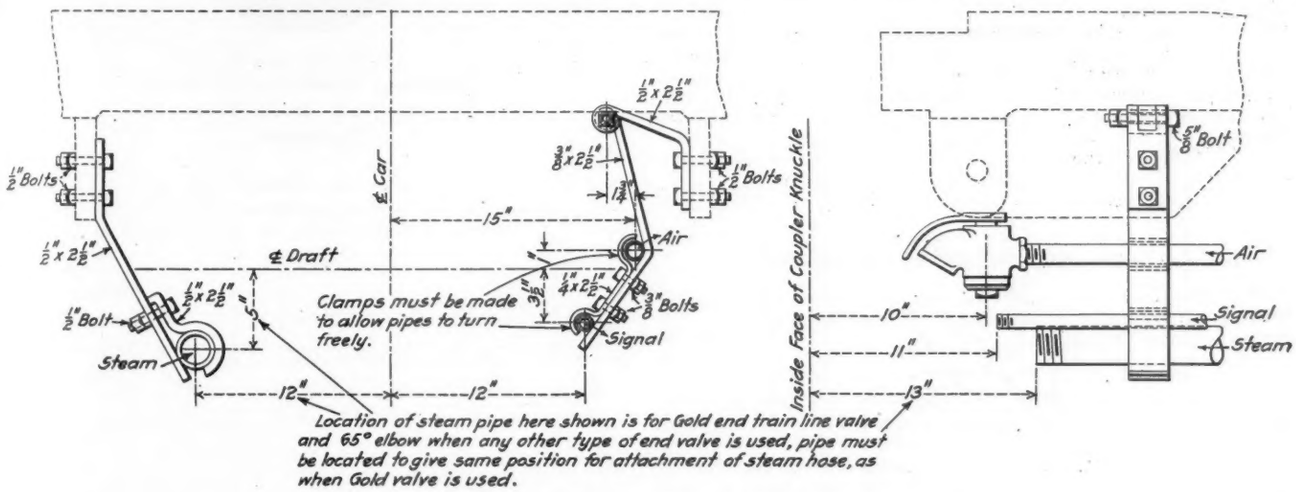


Fig. 2—Flexible Pipe Clamps Used on the Baltimore & Ohio

BRAKE PIPE AND FITTINGS FOR REFRIGERATOR AND COAL CARS.

The advantages derived from the use of galvanized pipe on coal and refrigerator cars are so large in the way of economy of maintenance and of satisfactory brake operation, that the committee respectfully begs to call once more the attention of the Association to the desirability of using this kind of pipe on cars of the classes named.

AIR BRAKE AND TRAIN AIR SIGNAL INSTRUCTIONS.

That portion of the Master Car Builders' and American Railway Master Mechanics' Association Air Brake and Train Air Signal Instructions under the heading "General Instructions" has been revised by the committee, and the revision is incorporated in this report.

That portion comprising the "General Questions and Answers" has not been dealt with for the reason that the number of different types of brake equipments now in use is so large, and the fact that local conditions of different roads require special modifications in methods of handling brakes, therefore it would be practicaly impossible to formulate a series of questions and answers that would be universally applicable. Moreover, the Air Brake Association has formulated a series of questions and answers that supplies all the air-brake information required in that form. The committee further recommends that a committee from this Association and from the Master Mechanics' Association be appointed to confer with the Air Brake Association committee having this matter in hand.

(The General Air Brake and Train Air Signal Instructions in the revised form, was made a part of the committee's report.)

The report is signed by:—R. B. Kendig, (N. Y. C.), chairman; B. P. Flory, (N. Y., O. & W.); R. K. Reading, (Penna.); R. B. Rasbridge, (P. & R.); L. P. Streeter, (I. C.); A. J. Cota (C., B. & Q.), and W. J. Hartman, (C., R. I. & P.).

DISCUSSION

W. E. Dunham (C. & N. W.): Referring to Section No. 9, "revision of air brake and train air signal instructions," it seems to me that with the varying conditions from year to year, whch do result, as we know, in our brake practice, that any attempt to keep up these questions and answers every year is entirely impractical, and I would make a motion that the committee's recommendation be not accepted, and that in its place the "Questions and Answers" be eliminated from our Standards, but that a special committee be appointed to follow it up.

B. P. Flory (N. Y. O. & W.): Few members of the committee are here, but I do not think the committee would have any objection to leaving out the questions and answers.

(The motion was then put and carried.)

L. C. Ord (C. P. R.): Is it the intention of the committee to recommend that the conductor's and signal valve cords should be extended to both platforms of cars; that is, to get two cords on each platform, particularly on vestibule cars?

Mr. Kelly: It was the intention to extend the cord to the platform of the car, so that they would be easily accessible from any point in the car.

L. C. Ord: I do not believe that the use of the conductor's valve cord on the platform, particularly on vestibule cars, in addition to the signal cord, is wise, and I am certain it is of little use.

W. E. Dunham: I would recommend that the suggestion of the committee regarding the adjustable pipe clamps, the clasp brakes for passenger equipment cars, the hand brake rigging, and a new train signal system be referred back to this committee for further action and investigation, in next year's report.

(The motion was seconded).

T. H. Goodnow: I believe the committee should go very carefully into the swinging pipe hangers, especially the one shown in Fig. 1. It has been my experience that that caused uncouplings instead of stopping them. The ice forming in there holds a pipe away from a standard location. I believe better results can be had, by keeping that in a fixed position rather than to try to adopt any sliding arrangement which would be interfered with by dirt and ice and other matter.

C. E. Chambers (C. of N. J.): I am heartily in accord with that movement. We have trouble enough with leaky train pipe joints now, to hold them in one position. In regard to the wire or chains for conductor's valve, I do not think a chain can be considered. It would be too heavy. I see no reason why the cords, with a wire inserted, would not be perfectly satisfactory, and I think also it would be a mistake to extend the conductor's valve cord on to either platform of the car.

(Mr. Dunham's motion was then carried).

L. C. Ord: I move that Section 3, concerning the cording of conductors' valves, be also included and referred back for further consideration.

(The motion was seconded).

E. W. Pratt: I rather agree with one speaker that the chain is not good. I think it would make more or less noise in pulling it, and if one link should be defective, it would seem less safe than a cord.

(Mr. Ord's motion was lost.)

C. E. Chambers: I move that the wording "including platforms" relative to the conductor's valve cord, be omitted from paragraph 3. (Cording Conductor's Valves.)

The President: Mr. Flory, what does the committee mean by the words "load carrying cars" in paragraph 3.

B. P. Flory: Baggage cars, express cars, etc.

C. E. Fuller: I would suggest that this committee, if it is continued, consider the advisability of having retainers that could be operated either from the inside or outside, on special class of cars, like express cars, because we have cases where two retainers are used where the retainers were up.

D. R. MacBain, (L. S. & M. S.): I think it would be perfectly proper to reject the cars in interchange that have the two retainers on, one on the inside and one on the outside, because manifestly if you can only get to one on the outside, the retainer on the car won't do you any good, because the one on the inside will release the brake. I think it is wrong construction, anyway. I think there is good ground for an objection to that portion of paragraph 3, where it recommends the signal cord and the conductor's cord being extended across the platform. The signal cord is used a thousand times where the conductor's valve is used once. (Mr. Chambers motion was then carried.)

B. P. Flory: The committee do not think that the specific recommendation should be that the chain must be used for the conductor's valve, but that either a chain or a cotton-covered wire can be used.

R. L. Kleine: The Pennsylvania uses the chain for the conductor's valve, and the cord for the signal valve, in order to decidedly differentiate between the two cords, and we have had no trouble whatever with the chains that we are using. We run the cord the full length of the car, but we do not run the conductor's cord out on the platform.

C. D. Young (Penn. Lines): I move that the report of the committee as amended in paragraphs 2, 3, 4, 9 and 10, be submitted to the Association by letter ballot. (The motion was carried.)

BRAKE SHOE AND BRAKE BEAM EQUIPMENT.

The committee has considered two sets of problems, those relating to the behavior of brake shoes and those affecting the design of brake beams.

BRAKE SHOES.

According to instructions, the committee has completed the tests on brake shoes, supplementing the work of previous years and closing up the gap which has heretofore existed between the earlier tests and those made at high pressure and speeds. As far as possible, the tests this year employed the same shoes as used in the last series of tests, or duplicates.

The following is an abstract of the report of Professor L. E. Endsley, who personally conducted the tests upon the shoes:

The tests were conducted upon the Master Car Builders' brake-shoe testing machine. The shoes tested were of six different kinds and were selected from the seven different kinds of shoes reported on in 1911. Three of the shoes tested this year, namely, Nos. 358, 376 and 377, were the same shoes as tested in 1911. The remaining shoes were two of the six original shoes submitted of each kind.

No.	Type	Received from	Length on Arc	Width	Thickness	Remarks
341 } 342 }	Plain Cast Iron	Penna.	14 in.	3⅜ in.	1½ in.	Steel Back
347 } 348 }	Spear-Miller	C. B. & Q.	13⅜ in.	3⅜ in.	1¾ in.	Steel Back—2 V Inserts.
353 } 354 }	National	C. M. & St. P.	14 in.	3⅜ in.	1⅝ in	Steel Back—Chilled Ends.
358 } 359 }	Diamond S Christie Type	So. Pac.	14 in.	4 in.	1½ in.	Steel Back—Expanded Metal Inserts—2½ in. Flange Stem each end.
369 } 370 }	U	N. Y. C. Lines	15¾ in.	3⅜ in.	1⅝ in.	Steel Back—Ends tapered and chilled.
374 } 375 }	Pittsburgh Shoe	Penna.	14 in.	3⅜ in.	1⅜ in.	Pressed Back—⅛ in. thick. Filled with a composition filler.

Each shoe was tested upon a steel-tired wheel under the following brake-shoe pressures: 12,000, 14,000, 16,000 and 18,000 lb., the initial speed of the machine being in each case 65 m.p.h. At each of the above pressures nine stops were made.

In anticipation of a test, the shoe was given a number of applications until a full bearing surface was obtained, after which it was accurately weighed upon a pair of scales. The shoes were first tested at a pressure of 12,000 lb., after which the pressure was increased by increments of 2000 lb. until a pressure of 18,000 lb. was reached, or until the shoe broke or became unserviceable.

The results of the tests are shown in Figs. 1, 2 and 3.

The loss in weight, due to wear, as plotted in Fig. 2, shows

C. H. Benjamin
Chairman, Committee on Brake Shoe and Brake Beam Equipment

that in the case of four of the different type of shoe tested, the loss increased as the pressure increased up to 16,000 lb. With two of the kinds of shoes tested, the loss reduced at 18,000 lb.

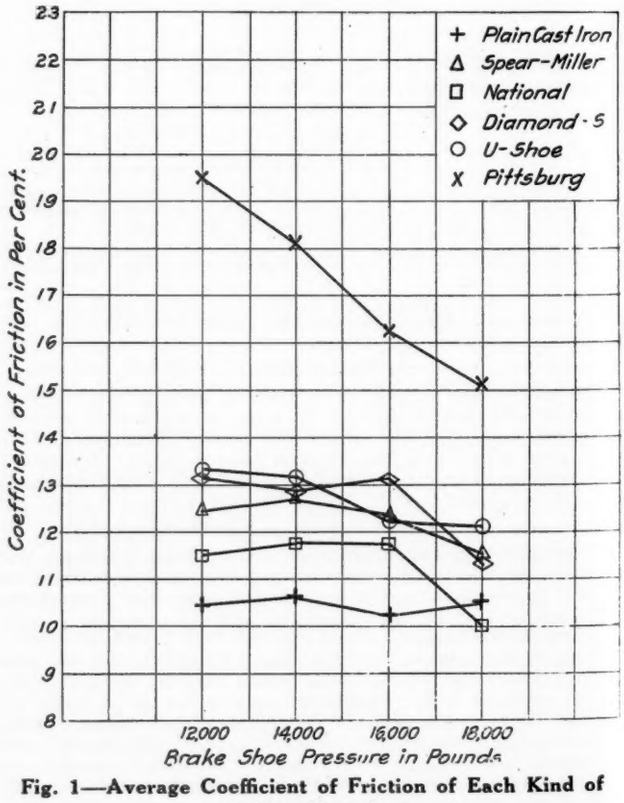


Fig. 1—Average Coefficient of Friction of Each Kind of Shoe Tested

pressure. This seemingly inconsistent result may be accounted for by the fact that two of the shoes, namely, the National and the Spear-Miller, broke during the tests at 16,000 lb., thereby increasing the wear for a time at least, and possibly decreasing

the wear when the broken shoes had again been worn to a new fit before the 18,000 lb. pressure.

Two of the types of shoes tested, namely, the Diamond S and the Pittsburgh, showed a tendency to reduce the wear as the pressure was increased up to 16,000 lb., but increased at 18,000 lb. pressure. No doubt this reduction in loss was due to a change in the per cent. of insert in contact or a change in the physical make-up of the shoe.

It will be seen from a study of Fig. 1 that the coefficients of friction of five of the different types of shoes tested fall somewhat close together, but not nearly so close as they did in the tests conducted at 80 m.p.h. and reported in 1911. In 1911 the variation was less than 2 in the value of the coefficient of

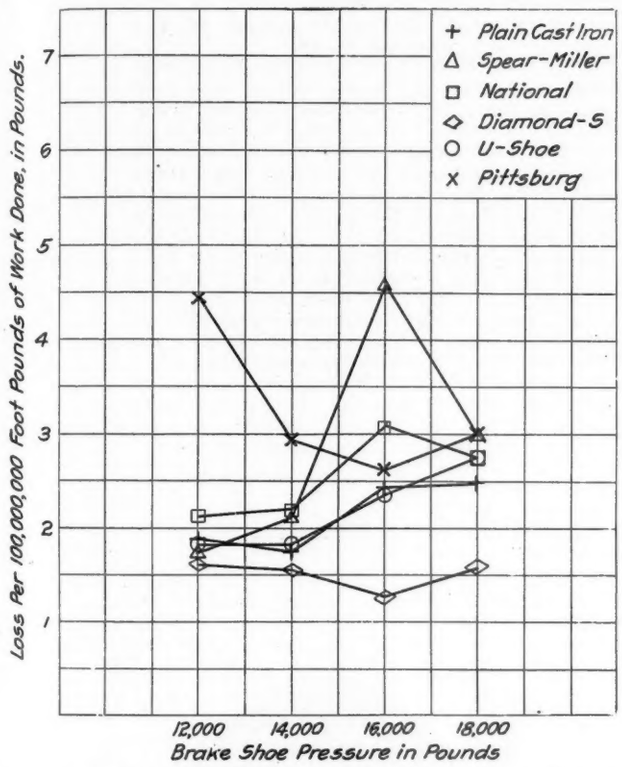


Fig. 2—Average Loss per 100,000,000 ft.-lbs. of Work

friction in per cent. at any pressure for all shoes tested, with the exception of the Pittsburgh shoe. The coefficient of friction in 1911 was never over 10 per cent. nor under 7 per cent., an average for all shoes with the exception of the Pittsburgh, being approximately 8.4, while in the tests this year at 65 miles per hour, the maximum was 13.3 and the minimum 10 per cent. for all but the Pittsburgh shoes. The average coefficient of friction at 65 m.p.h was 12.2, thus making it greater by 3.8 than it was at 80 m.p h.

The Pittsburgh shoe in the tests of 1911 at 80 m.p.h. varied in a straight line from 19.75 per cent. at 12,000 lb. pressure to 17.1 per cent. at 18,000 lb. pressure. It will be seen from the tests made this year that the coefficient of friction of this shoe was less at 65 m.p.h. than at 80 m.p.h. It will also be noted that the loss of weight in the Pittsburgh shoes was more at 65 m.p.h. than at 80 m.p.h. This apparent inconsistency in the coefficient of friction and loss in wear of the Pittsburgh shoe may be accounted for by the fact that the shoe is made of a composition filler, and as the shoes have been lying in the laboratory for three years where the temperature was 70 deg. or more, the binder which holds the filler together may have dried out, thus reducing the coefficient of friction and increasing the wear.

The results given in Fig. 3 show that the approximate distance per stop was inversely proportional to the coefficient of friction, all of the metallic shoes varying about the same as for coefficient of friction, and this variation is greater at 65 m. p. h. than at 80 m.p.h., as reported in 1911. The Pittsburgh shoe made stops at approximatey half of the distance required by the poorest metallic shoe.

BRAKE BEAM.

The committee recommends that the following be substituted for the specifications for No. 2 brake beams, as given in the M. C. B. Proceedings for 1913, page 854:

B. BEAM NO. 2.

4. *Initial Load.*—Apply an initial load of 12,000 lb., then reduce to 500 lb. Reset the deflection instrument to zero.

5. *Test Load.*—Apply a test load of 12,000 lb. and under this load measure the deflection, which is desired to be 1-16 in. or 0.0625, but should not exceed 0.07 in.

6. *Set Load.*—The beam must then be loaded to 24,000 lb., after which the set shall not exceed 1-100 of an in.

6½. *Total Deflection Test.*—The brake beam shall stand a total motion of the head of the machine of not less than 2 in. without failure at any point.

This change is recommended because it is more in accordance with engineering practice. It is assumed in the above specifications that 12,000 lb. represents the maximum working load and 24,000 lb. the load corresponding to the elastic limit of the beam, corresponding respectively to approximately 15,000 lb. and 30,000 lb. fiber stress.

Weights of Heads and Struts.—The committee has considered the desirability of adding to these specifications a limitation as to the minimum weight of heads and struts allowable and has collected considerable information concerning the weights of these parts now in use.

The committee believes that some specification which shall define the strength of these two important members should be added to the other specifications, but that specifying a minimum weight would not be sufficiently definite. The committee would like the benefit of further discussion on this point.

Standard No. 2 Brake Beam of Recommended Practice.—The committee would recommend that Beam No. 2, shown in Sheet 17-B, be adopted as Recommended Practice, and would ask that the question be again submitted to letter ballot. A trial of the proposed standard by various railroads will give more definite information as to changes which should be made in the design and construction.

Some figures, accompanied by photographs, submitted by C. D.

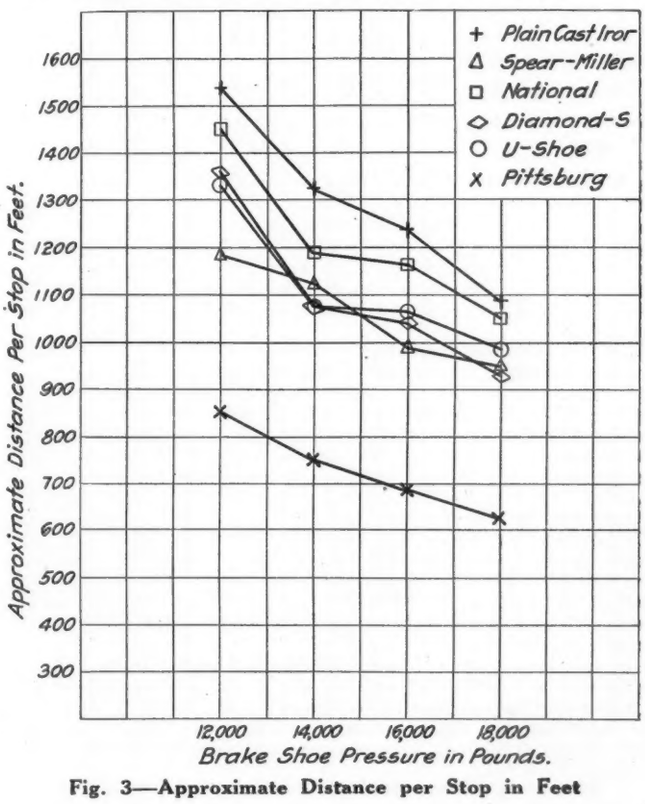


Fig. 3—Approximate Distance per Stop in Feet

Young of the committee, show that about 75 per cent. of the defective brake beams found on the Pennsylvania Road were removed on account of worn brake heads, indicating that if beams were properly hung and the locations for hanger holes and hanger brackets were standardized, a large number of failures could be prevented. Failure of the compression and tension members is further shown to be due largely to poor fits between the heads and struts and the other members. In other words, it is apparent that a more careful standardization of brake beams would result in a much smaller percentage of failures and much less expense to the railway companies.

The report is signed by:—Prof. C. H. Benjamin, (Purdue Univ.), chairman; C. D. Young, (Penna.); R. B. Kendig, (N.

Y. C.); J. F. De Voy, (C. M. & St. P.), and C. B. Young, (C. B. & Q.).

DISCUSSION

(The report was considered by parts.)

C. D. Young, (Penn.): The Association, I think, is indebted to Purdue University for having done it on their own time this year. The statement made that the coefficient of friction with increased load is practically uniform is not borne out for a similar shoe, such as the plain, cast iron shoe, in a very elaborate series of tests which we have made on the M. C. B. machine, and I think the probability of this apparent inconsistency is due to the fact that we have found by placing cracks in the shoe, that it increases the coefficient of friction. These tests, apparently, were run in the order of low pressures and high-pressures afterward, and undoubtedly the practice developed at the higher pressure tests. Therefore, the coefficient of friction increased with the cracking of the shoes. I believe if the shoes had been in the same condition for each test, you would have found about the same law applied for the plain cast iron shoes as applied for the Diamond *S* and the *U* shoe of the New York Central as well as the Pitttsburgh shoe. I believe with the data before the committee, that we have available, that more light could have been thrown on this apparent inconsistency. The other inconsistency pointed out in the loss of wear is taken care of, I believe, by the same condition, namely, the cracking of the shoe. A shoe which is cracked, and rendered thereby more flexible, we have found wears less per unit of foot pound of work done than a solid shoe, due to the fact it is permitted to conform to the contour of the wheel. I think it would be very desirable for the Association to have the three reports of the committee consolidated into one report. We now have complete data for these shoes.

A. R. Ayers (N. Y. C.): This series of tests was started, I understand, with a brake shoe pressure of 12,000 lb. on a steel tired wheel. A pressure of 9,000 lb. on clasp brake is an equivalent or probably better than 18,000 lb. on a single shoe truck, and it might be well for the committee, in continuing their work in other years, if they could make some tests with a 9,000 lb. shoe pressure.

C. D. Young (Penna.): For Mr. Ayers' information I believe that having data on the shoes at 6840, 12,000, 14,000, 16,000 and 18,000, you can draw a fairly well-inclined curve and obtain the approximate coefficient of friction at any of the loads intermediate between 12,000 and 6,000 pounds.

F. W. Brazer (N. Y. C. & H. R.): The Association is greatly indebted to Professor Benjamin and Purdue University and the committee, and I would move that the report of the Brake Shoe Committee be accepted, and their recommendation be carried out.

(The motion was carried).

(The second part of the report was then considered.)

A. R. Ayere: I would like to call special attention to the last part of the committee's report, when it is stated that "about 75 per cent. of the defective brake beams found on the Pennsylvania road were removed on account of worn brake heads, indicating that if beams were properly hung and the location for hanger holes and hanger brackets were standardized a large number of failures could be prevented." The design of the head as shown in solid lines on the proposed No. 2 beam is the method of suspension that I think is generally recognized as the least satisfactory; but it would seem that the limiting dimensions for the brake beam, together with the specification for strength that is submitted would take care of the beam proposition.

In my opinion one of the most important phases of the whole subject is to standardize and adhere to the proper method of hanging the beam; because our experience is exactly in line with the experience of the Pennsylvania, which they have recorded. The biggest trouble is in the beams being improperly hung and falling off the car.

C. E. Young: The examination of the brake beams mentioned was made at the scrap piles at the terminal points, and it is difficult, after a brake beam has been removed, to determine definitely whether it is due to improper hanging or improper maintenance of the shoes. The percentage amount represents the judgment of the inspector after examining the brake beam very carefully.

A corresponding investigation was made by Mr. DeVoy on the St. Paul, which did not include quite as many arguments, but the results were practically the same. In our case, the inspector is a man who has had considerable experience following up failure of brake shoes and brake beams. It is difficult to maintain shoes properly on the truck, if the beams are not properly hung. As soon as the shoes are applied they immediately take a false position, are worn off rapidly, and then the beam becomes defective due to a worn head.

C. D. Young: I believe the committee, at the time that design was formulated, agreed on the center location as an ideal one for proper brake construction. Of course, the center line of the hanger should go through the working face of the shoe. This location is as near as you can get to it under practical conditions, and if the location is properly selected, it seems to be satisfactory.

A. R. Ayers: There is not much question that the best location for the hanger is, theoretically, at the center, but practically it makes a brake beam hanging depend on the brake shoe remaining in place, but I think it will be found, quite generally, in practice, that if the brake shoe happens to break off, or for any reason is lost off, there is a very excellent chance of the hanger coming off, and the end of the brake beam dropping down.

J. J. Tatum. (B. & O.): I cannot quite understand how the standardization of the brake beams would prevent brake beams getting away from their fastenings and becoming damaged. It appears to me that the proper attachment of the brake beam to the brake will do more than anything else in making some form of brake beam a standard. I have found in my experience, not only in checking the scrap pile, but in going out along the road, and seeing where the failures have taken place, that the trouble is principally due to the improper method in which the brake beam is attached to the truck. The Baltimore & Ohio found, after going into this matter and making a more substantial hanger, attaching the hanger with a more substantial bolt to its place, that it held the brake beam in position, gave us much better results, and failures were very much reduced. There is another point that might be considered, which results in brake-beam failures—that is, turning the car over on the dumping machine, will loosen the keys, and they drop out. What we most need is a substantial method of placing the brake beam on the truck.

(The report was accepted and is to be referred to letter ballot.)

CAR WHEELS

The following resolution of the committee on maintenance of the American Railway Association, which was referred to the Master Car Builders' Association and the American Railway Engineering Association for investigation and report, has been

W. C. A. Henry
Chairman, Committee on Car Wheels

referred to the wheel committee and the committee on track, respectively, of the two associations:

"Resolved, That the subject of the contour of chilled car wheels and the throat clearances for frogs, guard rails and crossings be referred to the American Railway Engineering Association and the Master Car Builders' Association jointly for a full investigation and report with their recommendations for any change that they may conclude is desirable."

There is not sufficient available data showing the performance of the latest design of chilled car wheel, or comparison of its performance with the earlier designs to warrant the com-

mittee at the present time making any recommendations in the matter. To increase to any extent the width of flange will involve in all probability changes in the track in the way of providing more clearance through frogs, guard rails and railroad crossings.

For the information of the members the committee advises that the Bureau of Standards of the Department of Commerce, Washington, D. C., is preparing to make an experimental study of chilled car wheels, which will include foundry practice, investigation into the chemistry, metallurgy and mechanics of wheels,

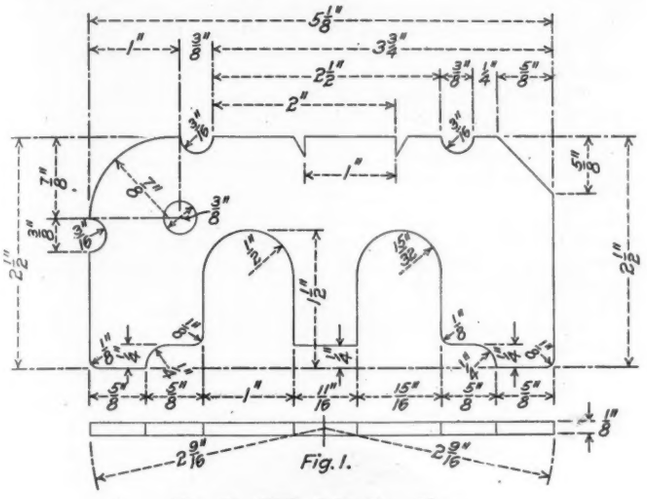


Fig. 1—Wheel Defect Gage

etc., and we are informed that it is the intention of the Bureau of Standards to ask the co-operation of the wheel manufacturers and the wheel users in making this investigation.

In order to provide means for measuring flat spots of one inch and two inches in length on passenger and freight car wheels respectively, it is recommended that two additional notches be provided in the present standard wheel defect gage, as shown in Fig. 1.

Attention is called to some errors that were made by the special committee which revised the specifications for wheels in 1913. It was the intention that these specifications were to be revised in form only and not in meaning; however, as these revised specifications were referred to letter ballot and adopted, it becomes necessary to bring the corrections before the Asso-

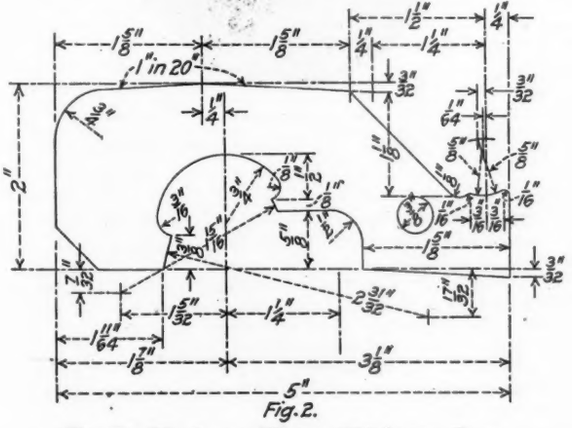


Fig. 2—Maximum Flange Thickness Gage

ciation. The following recommendations are submitted:

1. Wheel defect and worn coupler gage to be modified as shown in Fig. 1.

2. Specifications for cast-iron wheels, Paragraph 14, change first sentence to read as follows: "All wheels shall be numbered consecutively in accordance with the instructions from the railroad company purchasing them, and shall have the initials of such railroad company, also the wheel number, the weight of the wheel and month, day and year when made, plainly formed on the inside plate of casting."

3. Specifications for cast-iron wheels, Paragraph 4 (b), change last sentence to read: "The time when pouring ceases must be noted and two minutes later an examination of the wheel must be made. If the wheel is found broken in pieces, or if any cracks in the plate extend through or into the tread, all wheels of the same tape size as the wheel broken will be rejected."

4. Specifications for solid wrought steel wheels, Paragraph 4, branding, to read: "The name or brand of the manufacturer, date and serial number, shall be legibly stamped on each wheel; also purchaser's name and serial number, if specified. The tape size shall be legibly marked on each wheel. Sheet M. C. B. C-2."

5. Correct M. C. B. Sheet "N" to specify maximum gross weight not to exceed 95,000 lb.

6. Three diameters of steel tired wheels: 33, 36 and 38 in.

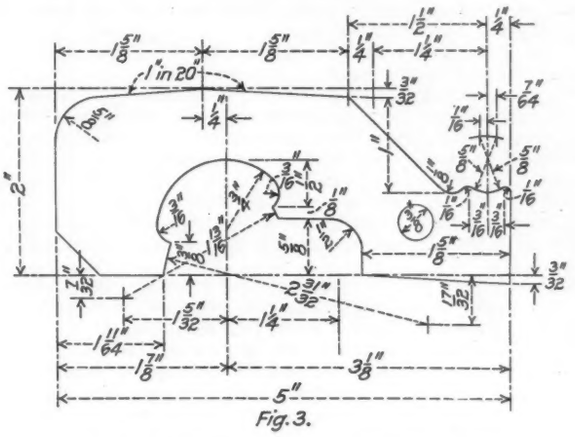


Fig. 3—Minimum Flange Thickness Gage

7. Three diameters of centers for steel tired wheels: 28, 31 and 33 in.

Maximum and minimum flange thickness gages to be as shown in Figs. 2 and 3.

The report is signed by:—W. C. A. Henry, (Penn.), chairman; A. E. Manchester, (C. M. & St. P.); R. W. Burnett, (C. P. R.); R. L. Ettenger, (Sou.); O. C. Cromwell, (B. & O.; J. A. Pilcher, (N. & W.), and C. B. Young, (C. B. & Q.).

DISCUSSION

W. C. A. Henry (Penn.): I would like to say something in regard to the circular inquiry. There is a request in the circular that we would like to have this report cover all wheels that broke under fair usage during the period from May 1, 1914, until May 1, 1915. These reports are to be made either quarterly or monthly at the convenience of the members. We do not care for any reports of wheels that failed under unfair usage, or that have defects in the nature of flat spots, shelled out, comby, or anything of that sort, but would like a full report of all the wheels which actually broke in two or more places; especially in the case of any failure involving the flange. In this case we would like to have the thickness of the flange, and the exact location and direction of the fracture. We felt that in order to make an intelligent report on this subject to the next convention, we must have more information than is now available. This includes hot wheels if they actually break, in both passenger and freight service.

J. S. Sheafe (B. & O.): I think it would be valuable for the committee to determine what should be the legible branding of steel wheels, the size of the letters and the depth of them, as well as the form of stencil.

O. C. Cromwell, (B. & O.): The committee has before it the question of increasing the thickness of the flange, and we want to try to find out how many flanges are actually failing, whether new or old, whether they are worn flanges or relatively new flanges, and similar items of information.

D. R. MacBain, (L. S. & M. S.): In connection with the remarks of the gentleman from the B. & O., I wired our engineer of tests yesterday to send us a little information along that line. He did not have time to do justice to the matter, but this is the information which he sends me:

"The removals were on account of the following causes: Tread wear, 26.8 per cent.; chipped rims, 5.5 per cent.; slid flat, 24.9 per cent.; shelled, 8.0 per cent.; worn flange, 23.0 per cent.; chipped flange, 1.3 per cent.; seamy, 5.5 per cent.; broken tread, 3.5 per cent.; broken wheel, 0.2 per cent.; broken flange, 1.3 per cent.; total 100.00 per cent."

As to the percentage of broken flanges in cast-iron wheels, I have this telegram this morning:

"Broken flanges in per cent., cast-iron wheels worn out

and failed, none for 625 lb. wheels, 0.8 per cent. for 675 lb. wheels, and 3 per cent. for 725 lb. wheels."

The President: Each member of the Association who has the opportunity should consider it as an important part of his duty to furnish information when asked for by the chairman of his committee. I hope the request of the chairman of this wheel committee will be fully complied with in the way of furnishing information later on.

B. P. Flory (N. Y. O. & W.): Referring to recommendation 5, "specify maximum gross rate not to exceed 95,000 lb." I will ask the committee whether that includes the weight of the wheel or not. It includes the weight of the wheel taking a 60,000 lb. car, and giving a 10 per cent. overload, it only leaves 29,000 lb. for the light weight of the car, and the great many roads refer to the light weight capacity of the cars as considerably more than that.

W. C. A. Henry: My recollection is that it does not, but the recommendation was made so that the freight wheels would harmonize with the specifications; in other words, the specification reads that way at the present time.

H. H. Vaughan (C. P. R.): Would it not be better to make reference to the tread in the thermal test a little clearer? Is it the intention that the crack must extend through the tread fully on the thermal test in order that the wheel shall be rejected?

W. C. A. Henry: The meeting of that clearly is, if the crack extends through the plate into the rim of the wheel.

H. H. Vaughan: That is what I think it should be.

W. C. A. Henry: Yes, we did not intend to make any distinction, if the crack runs up into the chill of the wheel. What the committee had in mind was the rim and not merely the outside portion. It will be agreeable to substitute the word "rim" for "tread."

C. D. Young, (Penn.): The error was made by the Committee on Form in redrafting the form of the wheel specification. I am quite sure that the manufacturers did not intend that this clause shall be "through the rim." They intended it shall be through the tread, which they mean shall cover that portion running up into the chill, so that you could see the defect and it would be visible from the outside surface of the wheel. I quite agree with the committee that it should be "into the rim," and although the manufacturers changed the description, that is what they are advocating.

E. A. Pratt, (C. & N. W.): Why is it considered necessary at this time to add to our standards additional sizes for steel tired wheels?

W. C. A. Henry: It would seem consistent, in view of the fact that we have three sizes for solid steel wheels, and as steel tired wheels are sometimes interchanged, we should have three sizes of the steel tired wheel also. (The report was accepted and is to be submitted to letter ballot.)

REVISION OF THE RULES OF INTERCHANGE.

The members individually and through the railway clubs in their vicinity have submitted such changes as they think desirable, and these have been considered, and under each rule for which changes have been suggested you will find the recommendations of the committee. [EDITOR'S NOTE: In abstracting this report only those suggestions are considered which were approved of by the committee.]

Rule 1.—It is recommended that the rule read as follows:

"Each railway company must give to foreign cars, while on its line, the same care as to inspection, oiling, packing, adjusting brakes and repairs as it gives to its own cars."

Rule 2.—The Chicago Car Interchange Bureau suggests that in second to last paragraph add the words, "properly side-carded with a bad order transfer, return when empty card, showing the defects for which the car was transferred." New card as follows:

.....RAILROAD.

BAD ORDER TRANSFER.

Send to.....R. R. Transfer track and

Send to.....R. R. when empty for repairs

Account of following defects.....

.....

Car No.....Initial.....

Date.....191...

Signed .....

Car Inspector.

The present practice in handling cars that are being transferred is to return the car to the delivering line without any information showing in what condition the car was received, and the reason for its transfer. This results in many cases in cars being returned to the line making the transfer, because the car inspector has no information as to how car was delivered, especially on cars transferred on account of owner's defects, also on cars destined to local industries and returned when empty to the delivering line in the same condition. The adoption of this suggestion will result in many cars being accepted back by the delivering line that are now being returned on account of inspectors having no knowledge as to when and with what defects the car was delivered. This suggestion is approved.

The committee recommends a change in the rule regarding leaking tank cars, as follows:

"Cars containing inflammable liquid which is leaking must be repaired or transferred without unnecessary movement, or at nearest available point."

The committee suggests that the fourth paragraph of Section (e) be changed to read:

"When load is transferred by receiving line, the car, when empty, may be returned to the delivering line properly side-carded with a bad order transfer, returned when empty card, showing the defects for which the car was transferred, in which case it must be accepted."

The Central Ry. Club recommends as follows: In paragraph (c) page 4. Insert in brackets on margin the words: "Initial road responsible."

This recommendation is concurred in by the committee in so far as it applies to inside door protection on closed cars, but inasmuch as the change is one in reference to which the Association has no authority to legislate and as the transfer rule is an A. R. A. rule, the question has been referred to that Association for a ruling.

J. J. Hennessey
Chairman, Committee on Arbitration

The Western Car Foremen's Association suggests that return card referred to in this rule and shown on page 98 be revised to place date on the card. This suggestion is approved.

Section (c) The committee recommends that this section be changed to read: "Cars improperly loaded (not complying with the Loading Rules) when transfer or rearrangement of lading is necessary."

Rule 3.—The committee recommends a new Rule 3, as follows:

(a) Cars will not be accepted in interchange unless equipped with air brakes having 1¼ in. air-brake pipe and angle cocks; also quick-action triple valve, pressure-retaining valve and an efficient hand brake.

(b) Cars will not be accepted in interchange equipped with stem or spindle coupler attachments.

(c) Cars built after October 1, 1914, with journals or journal bearings other than M. C. B. Standard, will not be accepted in interchange.

(d) Cars built after October 1, 1914, will not be accepted in interchange unless equipped with either the No. 1 or the No. 2 M. C. B. Standard brake beams and so marked plainly on strut by stamping or casting on.

(e) After January 1, 1915, tank cars (empty or loaded) will not be accepted in interchange unless the safety valves are stenciled to show adjusted, etc., within the time limit required

by paragraphs 5, 6 and 7 of the M. C. B. specifications for Tank Cars.

(f) After July 1, 1916, cars will not be accepted in interchange unless stenciled showing month and year originally built. Cars built prior to 1895 may be stenciled "Built prior to 1895."

(g) After October 1, 1915, no car built for the purpose of carrying products which require the use of salt with ice for the refrigeration of such products will be accepted in interchange unless equipped with suitable device for retaining the brine between icing stations.

(h) After October 1, 1916, cars will not be accepted in interchange unless equipped with all-metal brake beams.

(i) After October 1, 1916, cars will not be accepted in interchange equipped with continuous draft rods.

(j) After October 1, 1916, no car will be received in interchange unless the body of the car is marked as provided in Rule 86, i. e., either capacity, maximum weight, and on tank cars Limit Weight No. 1 or Limit Weight No. 2.

(k) If the car has air-signal or train-line steam pipes, the hose, pipes and couplings are at owner's risk, unless the car is stenciled that it is so equipped.

(l) When two or more cars chained together, or any car which requires switch chains to handle them, are delivered at an interchange point, the receiving road shall deliver to the delivering road at the time an equivalent number of switch chains of the same size as the chains so used on the cars delivered, or, in lieu thereof, furnish a defect card for such chains.

It is felt that it would be much better to concentrate these special requirements regarding the interchange of cars under one head or rule than to have them scattered all through the book.

Rule 4.—The committee recommends the consolidation of Rules 3 and 4 as Rule 4, because the items cover requirements as to the use of the repair card.

W. J. Stoll suggests adding to this rule suggestion made in Circular 18. The C. I. I. and C. F. Association suggests adding to the second paragraph: "At outlying points where joint inspection is not in effect, the matter will be left to the judgment of the receiving line. At the larger points where chief interchange inspectors are employed, the decision will be made by the chief interchange inspector as a representative of the car owner and the receiving line."

Suggestion approved, as it provides a way to define what constitutes slight repairs.

The committee recommends that the rule be changed to read: "Defect cards shall not be required for missing material in fair usage from cars offered in interchange. Neither shall they be required of the delivering company for improper repairs that were not made by it, with the exception of the cases provided for in Rules 35, 56, 57 and 70."

Rule 7.—The committee suggests adding to the last paragraph, "in which case the cards must be entered in the billing statement in the first four columns, with the notation 'No bill' in the fifth column for reference," in order to furnish a permanent record of "No bill" repair cards on the bills and to avoid unnecessary and expensive tracing. This will also serve more accurately to fix the responsibility for wrong repairs and thus safeguard the owner.

Rule 9.—The committee suggests the following change: "If M. C. B. Standard brake beam is applied, state whether No. 1 or No. 2, in addition to name of beam."

In first paragraph, page 7, first line, change to read: "When triple valve, cylinder or centrifugal dirt collector is cleaned."

It is further recommended that the standard stenciling for brake cylinders be enlarged to include all cleaning and stenciling of centrifugal dirt collectors by adding a line with the initials "D. C." for dirt collectors; also a line for the date cleaned, shop mark and name of road doing the work. This question is submitted to the Committee on Revision of Standards and Recommended Practice for consideration.

Rule 12.—The committee recommends a new paragraph, as follows: "The joint evidence may be obtained at any point on the home line at which the improper repairs are found, but preferably at the point where the car is received, and only after an actual inspection has been made."

Rule 17.—The committee proposes a revision of the rule as outlined below:

(a) In repairing foreign cars: Defective non-M. C. B. Standards may be replaced with M. C. B. Standards (which must comply with M. C. B. specifications), provided such substitution does not impair the strength of the car. Any increased cost resulting from and any expense of alteration necessary for the application of such M. C. B. Standards shall be charged to the party responsible for the repairs. Any expense of alteration necessary for the application of such M. C. B. Standards to be charged to party responsible for the repairs. Scrap credits to be allowed for undamaged parts thus removed.

(b) Malleable iron, wrought iron or steel M. C. B. Standards may be substituted for each other or for gray iron M. C. B. Standards. Gray iron M. C. B. Standards applied in lieu of malleable iron, wrought iron or steel M. C. B. Standards shall be considered as wrong repairs.

(c) In replacing M. C. B. Standard couplers or M. C. B. Temporary Standard couplers the dimensions of shank and butt of M. C. B. couplers standard to the car must be maintained.

(d) If the car owner elects on account of improper repairs to remove M. C. B. Standard or M. C. B. Temporary Standard coupler in good condition, secondhand credit should be allowed, and charge be confined to secondhand coupler applied.

(e) When necessary to renew brake beam, any metal brake beam meeting M. C. B. specifications may be used, provided that the beam applied is at least as strong as the beam standard to the car.

(f) Billing repair card to specify kind of material applied and removed, and bill rendered in accordance therewith.

(g) Cast-iron brake shoes may be replaced with brake shoes having reinforced back and the increased cost charged to party responsible for the repairs.

(h) White pine, yellow pine, fir or cypress may be used when repairing siding, when of equal grade or quality to the material standard to the car. Fir, oak or southern pine may be substituted for each other in renewing or splicing of longitudinal sills.

Reason: To discourage the use of non-M. C. B. Standard material and facilitate freight-car repairs.

Rule 18.—O. S. Jackson and A. C. Deverell suggest amending the third paragraph of rule to read "October 1, 1916."

Reason: Time allotted too short and the additional two years will be only a reasonable length of time to get cars home and make necessary changes.

It is recommended by the committee that the time be extended until October 1, 1916.

It is called to the attention of car owners who have cars on their line with American continuous draft rods that, while the extension of time is recommended, they should not abate their efforts toward getting such draft rods out of service. It is also called to the attention of members of the Association that there are other draft carrier construction on the same principle as the American continuous draft and that these are also covered by the rule.

Rule 19.—R. E. Smith suggests changing the word "shall" in second line to "must."

The suggestion is approved.

Add to the rule: "Cast-iron brake wheels." The suggestion is appproved.

Rule 20.—The Central Railway Club, Pittsburgh Railway Club and J. E. Keegan suggest changing, in third line, first paragraph, the word "may" to "must," and adding the following to the paragraph: "When construction of car and trucks precludes the common methods of adjusting coupler heights, the application of metal shims between journal boxes and arch bars will be permissible." The suggestion is approved.

Rule 21.—The Central Railway Club and J. E. Keegan suggest adding the following clause: "Also for applying temporary transverse tie rods to cars with sides spread or bulged beyond the clearance limits of the handling line."

The committee approves of the suggestion. When it is necessary to appply transverse tie rods on account of car sides being bulged out, they should be charged against the owner of the car, because such spreading or bulging is an indication of weak construction.

Rule 28.—The committee proposes that the rule be made vacant. The first part of the rule is already covered in Rule 87. The committee recommends adding the latter part of the rule to Rule 87 as an additional exception.

Rule 29.—The committee recommends that this rule be reworded:

"When secondhand axles are applied the journals must not exceed 3/8 in. over the standard length and the collar must be not less than 5/16 in. thick. The diameter of the wheel seats or centers must not be less than, or the diameters of the journals must be at least 1/8 in. greater than, the limiting diameters given in Rule 86"—balance of rule as at present.

The committee also proposes to the Association that the wheel and axle committee investigate the propriety of maintaining the item of limit of collars on axles at less than 1/4 in., having in view the increased car capacities and the safety of this limit for these cars. This information should properly be shown by an additional column in the tabulations in Rule 86.

Rule 33.—The committee proposes a new rule, as follows:

"The following will not be considered as an owner's responsibility:

"Straightening or replacing ladders, handholds, sill steps or brake shafts."

Rule 35.—The New England Railroad Club suggests new paragraph: "After January, 1915, cars not equipped with M.

C. B. Standard axles, journal boxes and contained parts will not be accepted in interchange."

The committee does not approve. It considers the recommendation desirable, but does not believe it can be carried out in practice.

Also, another new paragraph: "After October 1, 1916, tank cars not equipped with suitable jacking castings will not be accepted in interchange." The committee believes this a desirable suggestion, but would refer it to the Tank Car Committee for investigation.

F. H. Clark suggests change in third paragraph, page 25, to read: "After October 1, 1915, cars not having stenciled the year and month when built new will not be accepted in interchange."

The committee proposes an extension of time until July 1, 1916; also that the date car was built means the month and year the car was built. See new Rule 3.

Rule 37.—The committee has considered the various recommendations regarding the combinations of defects in Rules 37 to 42, inclusive, and notes that a strong sentiment exists in favor of eliminating all the combinations, but feels that the time is not yet ripe for the complete elimination of all combinations and would therefore make the following suggestion:

Eliminate Rules 37 and 39 and the notes following Rule 42 with reference to continuous draft rods and missing couplers, for the reason that a coupler very seldom appears as a factor in these combinations.

Rule 42.—The committee recommends the elimination of the first two notes following this rule, as the elimination of Rules 37 and 39 makes these notes unnecessary; also the substitution therefor of the following note:

"When a combination of defects involves decayed parts, or involves longitudinal sills requiring renewal or splicing, due to elongated holes, or to sills split on this account, a joint inspection statement, made as per Rule 120, shall accompany the billing repair card, which together will be authority for bill against the owner," so as to make unnecessary the present prictice of holding the car for such repairs until owner's authority can be procured.

Rule 43.—Central Railway Club and J. E. Keegan suggest extending bracket on left to include heading "All-steel underframe or all-steel cars."

The committee approves this suggestion.

Rule 46.—The committee recommends that this be transferred to paragraph (k), Rule 3.

Rule 47.—The committee suggests that the rule be transferred to paragraph (l), Rule 3.

Rule 52.—The committee suggests the rule be changed to read as follows:

Inside bracket:

"Running boards in bad order or insecurely fastened"—owner's responsibility.

Outside bracket:

"In making repairs to safety appliance details, nails or lag screws must not be used where screws, bolts or rivets are required by law. Handholds or grabirons must be of wrought iron or steel."

Rule 56.—The M. St. P. & S. S. M. suggests that second paragraph in regard to brake beams be changed so that railroads will be given much more time to equip cars with metal beams or have former action entirely rescinded.

F. A. Torrey and T. H. Goodnow suggest that date regarding brake beams be extended to 1916.

The committee suggests an extension of time. See revised Rule 3.

Rule 57.—The Pittsburgh Railway Club, Central Railway Club and J. E. Keegan suggest cutting out air hose and label on page 31 and modify it to show that label is located within 6 in. of hose coupling.

The recommendation is approved, for the reason that it renders the label observable from both sides of the car, and the label in this position is less liable to injury from chafing.

Also change third and fourth paragraph to read: "After October 1, 1914, the delivering line will be responsible for hose not conforming with the 1913 M. C. B. Standard specifications and so labeled, except that 1905 M. C. B. specification hose, the date of which shows it was manufactured before October 1, 1914, may continue in service until it is worn out."

Rule 59.—The committee proposes that the Executive Committee refer to the Train Brake and Signal Committee the question of proper location of centrifugal dirt collectors, for the reason that some roads are applying them in such position that they trap the water from the train line, and consequently are liable to freeze in the winter time.

Rule 62.—The committee recommends that this rule be changed to read: "In replacing air-brake hose on foreign cars, new M. C. B. Standard 1913 specification hose must be used."

Rule 66.—S. G. Thomson suggests after the word "with" insert "axles or," so as to read "axles or journal bearings," etc.

Reason: To enforce the use of M. C. B. standard axle and journal bearing.

W. H. Lewis suggests eliminating this rule, as it is covered in Rule 35.

Both suggestions are approved, see rewording in revised Rule 3.

Rule 69.—The committee recommends that the rule be changed to read:

"Broken flange; chipped flange, if chip exceeds 1½ in. in length and ½ in. in width. Broken rim, if tread measured from flange at a point ⅝ in. above tread is less than 3¾ in. in width (see Fig. 5), provided these defects are caused by derailment or wreck."

Rule 78.—The committee recommends changing rule to read: "Cracked or broken flange, chipped flange, if it exceeds 1½ in. in length and ½ in. in width; broken or chipped rim, if tread measured from the flange at a point ⅝ in. above tread is less than 3¾ in. in width (see Fig. 5; cracked tread, cracked plate, one or more cracked brackets, or broken in pieces, provided these defects were not caused by derailment or wreck."

Rule 79.—The committee recommends that this rule be made vacant, because it is included in Rule 78.

Rule 80.—The committee recommends that the first paragraph be eliminated, because it has been included in Rule 78.

Rule 82.—The committee suggests that this rule be made vacant, because it has been included in Rule 78.

Rule 83.—The reference on page 41, under Fig. 5, should be changed to read: "See Rules 6, 9 and 78."

Rule 87.—The committee suggests that the rule be changed to read:

"Any company making improper repairs is solely responsible to the owner, with the exception of the cases provided for in Rules, 3, 56, 57 and 70, and excepting that a company applying axles smaller than the limits given under Rule 86 shall not be held responsible for improper repairs if the car is not stenciled showing the capacity or maximum weight, or Limited Weight I or Limited Weight II."

Rule 88.—R. E. Smith and New England Railroad Club suggest changing the word "shall" to "must" in the second line.

The committee approves.

Rule 90.—The only change the committee suggests is to change the reference to Rule 3 instead of Rule 35.

Rule 91.—R. E. Smith suggests changing the word "should" to "must" in the third line of note under this rule.

The suggestion is approved.

Rule 95.—The committee suggests that the second and third paragraphs be changed to read:

"Brake beams, including shoes, heads, jaws, key bolts, cotters, brake pins and hangers, when lost with the brake beam.

"Brake levers, lever guides, key bolts, pins, cotters, top and bottom brake rods, whether or not they are lost with the brake beam."

"Labor and material may be charged for key bolts, cotters and brake pins when lost independently of above items," to clarify the rule as previously written.

Rule 105.—The committee suggests that a note be added to this rule, as follows:

"NOTE.—Manufactured articles are those which are not subject to competitive prices, and which can only be obtained from one manufacturer or concern," to more fully explain the term used.

Rule 112.—The committee recommends that Rule 112 be changed to read as follows:

"When the body or trucks of a foreign car are destroyed or badly damaged, the owner shall, upon request, furnish depreciated value of body and trucks separately (the same to be figured from the date the car was originally built), and the party damaging shall have the option of rebuilding or settling under the depreciated value.

"If it is decided not to rebuild, the owner must be immediately advised."

Rule 115.—The committee suggests that the last phrase of the last paragraph be changed to read: "Except that secondhand value will be allowed for all metal brake beams good for further service and the average credit price for wheels," to conform with the interpretations given in Circular No. 26.

The committee would also recommend the abolition of the last paragraph of this rule (top of page 84) in reference to the underframes of damaged steel and steel-underframe cars, because the adoption of revised Rules 112 and 120 will render this provision no longer necessary.

Rule 120.—The committee recommends that the rule be changed to read as follows:

"A car unsafe to load on account of general worn-out condition due to age, decay or corrosion, shall be jointly inspected by the handling line and a representative of the owner of or a disinterested line, whichever can be most conveniently obtained by handling line. If inspectors agree that the car is

unsafe to load on account of general worn-out condition due to age, decay or corrosion, the result of such joint inspection, entered on form shown on page 4, shall be sent to the car owner, showing in detail all defects found on car, also an estimate of the cost to rebuild the car. Upon receipt of this information the owner must either authorize the destruction of the car, or authorize the handling company to rebuild it. In the latter case the owner must forward to the handling company complete plans and specifications necessary for the rebuilding of the car. If the owner elects to have the car destroyed, the handling line shall be allowed credit for all material at M. C. B. scrap prices, less labor cost of destruction."

Rule 121.—The committee suggests that rule be eliminated, as it is taken care of in revised Rule 112.

Rule 122.—The committee suggests adding in the third line, first paragraph, preceding the word "charges," the words "or express and," an additional paragraph, as follows:

"Material weighing less than 125 lb. gross weight ordered from car owner should be shipped by express," to assist in the more prompt repairs of cars.

PASSENGER CAR RULES.

Rule 3.—Central Railway Club, the C. I. I. & C. F. Association suggests adding as an owner's defect: "Equipment and tools missing from the inside of baggage, mail and express cars are an owner's defect when missing at the time of unloading."

The committee approves the idea, but recommends that it should read as follows:

"Equipment and tools missing from the inside of baggage, mail and express cars are an owner's responsibility."

Rule 17.—The committee recommends the following:

"All inside or concealed parts of passenger equipment cars are at owner's risk."

(Signed): JOS. W. TAYLOR,
Secretary.

DISCUSSION.

The Secretary: I would suggest that we take up that Circular No. 42, from the executive committee as follows:

"The prices for labor and materials on repairs to foreign cars under the M. C. B. rules up to October 1, 1912, contemplated that the work be done at the actual cost of the labor and material, with no allowance to the repairing line for use or upkeep of facilities furnished, supervision, etc. To partially reimburse the repairing line, for the use of its facilities and to stimulate the repairs to freight cars, the Association as of October 1, 1912, authorize the application of a flat 10 per cent. increase to the net total of freight car repair bills. The 1913 convention adopted, at the recommendation of the Committee on Revision of Prices for Labor and Materials, an increase in this labor rate per hour of 16 2-3 per cent. or from 24 to 28 cents per hour, the 10 per cent. increase on the net total of bills, authorized in 1912, being absorbed in this increase.

"At recent hearings before the Interstate Commerce Commission, on the request of private car owners for an increase in their mileage rate, it was developed very conclusively and forcibly that this increase of 16 2-3 per cent. was insufficient; that in repairing any cars, in order to compensate the repairing line for the use of its facilities, their upkeep, switching, supervision, etc., an overhead charge very considerably greater than the 16 2-3 per cent. provided must be made.

"While some non-members of the Association, and non-subscribers to the rules accept charges, and bill for repairs under the rules, there are others who insist on billing against the railroads on the basis of their full cost, including full allowance for all overhead charges, the resulting charges being considerably in excess of the allowances under the rules, while the railroads, on repair to cars of such owners, continue to bill, in accordance with the rules. This condition is not equitable to the railroads, nor is it a condition which we can continue. Your committee feels that it will be necessary to take such action as will permit charges under the M. C. B. rules to be made on a basis that will represent cost and not loss. It does not feel that any distinction can consistently be made in charges as between members and subscribers to the rules and non-members and non-subscribers to the rules, but that any increase which may be made must apply to all car owners alike.

"Your committee therefore proposes that, in order to more fully compensate for the repairing line, an addition of 65 per cent. of the labor cost should be added to the bill to cover overhead expenses. As a 16 2-3 per cent. increase was authorized last year to partially provide for this, your committee would now recommend adding to the total labor cost enough to make up the 65 per cent. for overhead charges, which is necessary to approximately cover supervision, use of facilities, upkeep of plant, switching, etc."

F. H. Clark, (B. & O.): Owing to the importance of the subject, and in order that the matter may receive thorough consideration, I move that the question of an increase in the labor rate to cover overhead charges be referred to a special committee, with instructions to report next year. (The motion was carried.)

The Secretary: During the year Arbitration cases Nos. 918 to 954 have been decided and distributed to the members, and a copy of same herewith submitted as a part of this report for your approval. (The decisions were approved.) (The decisions and interpretations made by the arbitration committee during the year were approved.)

The Secretary: The next order of business is the recommendations of the arbitration committee. The arbitration committee has two additional suggestions to make, which were agreed to last evening. One is in regard to Rule 3, Section M., a new section: "On and after October 1, 1916, refrigerator cars not equipped with door hooks and fasteners, to secure the doors in the open position, will not be accepted in interchange."

An additional note to Rule 30: This note is brought about by the action of the American Railway Association. Add a note to Rule 30, as follows: "The marked weight shall be the multiple of 100 lb. nearest the scale weight, except that when the scale weight indicates an even 50 lb., the lower multiple shall be used." That is the resolution adopted by the American Railway Association in their weighing problem, and the arbitration committee thought best to incorporate that in the rules of interchange. (The recommendations of the Arbitration Committee concerning the changes in rules of interchange were approved in toto.)

PRICES FOR LABOR AND MATERIAL

The committee, appointed to suggest additional prices or modifications of present prices in the Rules of Interchange, did not prepare a circular of inquiry this year, for the reason that it was thought proper by the committee to review the work already done and make such changes as to make the rules clearer, as well as make such changes in the present prices as would more nearly represent the average cost of labor and material used in making repairs to car equipment, and add such other items as were presented to them by the Arbitration Committee from time to time for their consideration, and new items which the committee found necessary in connection with its work.

F. H. Clark
Chairman, Committee on Prices for Labor and Material

The committee suggests that for next year special attention be given to the passenger car price rules, in order that they be brought up to the standard of the freight car price rules.

The following recommended changes are presented for approval:

Rule 98.—If new wheels and axles are substituted for average credit price wheels and secondhand axles, proper charges and credits shall be allowed, although such substitutions be made on account of only one loose or defective wheel or a defective axle, with the following exceptions: In case the owner of a car removes a damaged wheel or axle, no charge shall be made for

any difference in value between the parts used and those removed that are not damaged.

The price for forged or rolled steel wheels shall be based on the scrap value of $4.50 for metal inside the condemning limit (which is ¼ inch above the limit groove) plus $0.625 for each 1/16 inch of service metal (on radius of tread) in connection with standard full flange contour.

No credit will be allowed owner for loss of service metal due to turning off wheels. Should there be a further loss of service metal, however, due to the application of other wheels, the proper credit for such additional loss must be given the owner. Any increase in the amount of service metal, due to the application of other wheels, may be charged to the owner.

When repairs are not covered by a defect card, the proper credit for any loss of service metal must be given the owner; and charge shall be made against the owner for any increase in the amount of service metal, due to application of other wheels.

When the repairs are covered by the defect card of another company, charge covering such repairs shall be made against the owner of the car, the defect card and the billing repair card to be attached to the bill. The owner to render counter bill on the authority of the defect card against the company issuing same, including an additional charge to cover the loss of service metal on account of the defects covered by the card. Should there be an additional loss of service metal, on account of the application of other wheels, the company making the repairs shall allow the proper credit to the owner to cover such additional loss of metal. Should there be an increase in the amount of service metal, due to the application of other wheels, such increase may be charged to the owner.

The above provisions shall govern any loss or increase of service metal on account of the mate wheel, even if same is not defective, when both wheels are turned off to correspond.

The necessary information must be given in all cases, as provided in Rule 10.

In cases of slid-flat wheels ⅛ in. for loss of service metal will be allowed for flat spots 2½ in. long and 1/16 in. for each additional inch or fraction thereof.

[Numerous changes were made in prices in Rules 101, 107, and for the maintenance of passenger cars in interchange.—ED.]

Repairs of Steel or Steel Parts of Composite Cars.—All rivets ½-in. diameter or over, 14 cents net per rivet, which covers removal and replacing of rivets, including removing, fitting, punching or drilling holes when applying patches or splicing and replacing damaged parts, not to include straightening.

All rivets ¼-in. diameter and less than ½-in. diameter, 8 cents net per rivet, which covers removal and replacing of rivets, including removing, fitting, punching or drilling holes when applying patches or splices and replacing damaged parts, not to include straightening.

Straightening or repairing parts removed from damaged car, 60 cents per 100 pounds.

Straightening or repairing parts in place on damaged car; also any part that requires straightening, repairing or renewing, not included on rivet basis, 28 cents per hour.

Repairs of steel tanks of tank cars:

Labor, repairing and testing, per hour	$0.40
Steaming, per tank	.75
Water for testing, per 1,000 gallons	.06

In making repairs to cars on rivet basis, the cost of removing and replacing fixtures not secured by rivets, but necessarily removed in order to repair or renew adjacent defective parts, should be in addition to the rivet basis; rules covering wood-car repairs to govern.

Dismantling wood constructed cars, including trucks and all work necessary including handling, assorting and weighing scrap.

Box, stock and other house cars, except refrigerators	$10.00
Flat car	6.50
Gondola or hopper car, having sides over 36 inches	9.00
Gondola or hopper car, having sides 36 inches and under	8.00
Refrigerator	12.00

Change last sentence to read: "For trucks with steel or steel-tired wheels, an additional allowance of $84.00 per car shall be made."

The report is signed by:—F. H. Clark, (B. & O.), chairman; C. E. Carson, (N. Y. C. & H. R.); C. F. Theile, (P. C. C. & St. L.); Ira Everett, (L. V.); H. H. Harvey, (C. B. & Q.); C. F. Giles, (L. & N.), and C. U. Swanson, (A. T. & S. F.).

DISCUSSION

J. J. Tatum (B. & O.): The committee has decided that next year we should do more work on the passenger car rules in order to bring them up somewhere near the standard of the freight car rules. It will be noticed on page 2 that this year we have simply made some changes that made the rules more clear than as they were originally written, so they would be better understood, and there were some additional items added, and some few which were reduced in price.

C. E. Fuller (U. P.): I move that the report of the Committtee on Prices for Labor and Material be accepted and approved.

(The motion was seconded.)

W. Schlafge (Erie): Our company recommends a change in Rule 116, with respect to metal centre sills, and instead of making the price depend upon the depth, we proposed to substitute a modulous section. We feel that the sectional area should determine the price rather than the depth, and we feel that particularly since we are equipping 1,800 cars with the continuous draft member, 9 in. in depth, weighing 35 lb. to the foot. It may be possible that the action taken with reference to the special committee this morning, in regard to prices for the retirement of cars, may cover this situation.

J. J. Hennessey (C. M. & St. P.): I think it is too late to take action on this year, but I am certainly in accord with the idea that such a committee be appointed.

F. F. Gaines (C. of Ga.): I think I would like to have the incoming committee consider, as well as this, the reinforcing of cars with continuous steel centre sills; also, the reinforcing of old wooden equipment with cast-iron draft arms. Quite a number of us are spending a good deal of money to put in the steel draft arms instead of using the continuous metal sills, and there is no price allowed for that whatever, and I think that thing should be considered by them.

(Mr. Fuller's motion was then put and carried.)

COMPARATIVE REGISTRATION FIGURES

Following are the registration figures for the past four years for the first day of the convention. In comparing them it must be remembered that M. C. B. and M. M. conventions alternate each year, so that the figures for this year are strictly comparable only with those of two years ago:

	1911	1912	1913	1914
Members M. C. B. & M. M.	375	263	374	466
Special Guests	163	169	141	182
R. R. Ladies	254	211	222	200
Supply Ladies	287	164	221	350
Supply Men	1240	1149	1264	1169
Totals	2319	1956	2222	2367

COMMITTEE ON OBITUARIES

The following members have been asked to serve on the committee on obituaries:

For G. H. Eaton, of the Canadian Pacific, R. W. Burnett. For D. E. Fitzgerald, of the Frisco, W. H. V. Rosing. For William O'Herin, W. L. Kellogg of the M. K. & T. For Jason Rigby, J. W. Taylor. For Charles Waughop, William Bawden. For O. F. Zeug, E. L. Phillips; and for Mr. G. Larson, of the C. St. P. M. & O., W. K. Thorn.

COUPLER COMMITTEE EXHIBIT

The Coupler and Draft Committee has an exhibit of the A and B. couplers in the M. C. B. booth to the right of the convention hall. It is desired that all members of the association visit the booth and look over these couplers. In the exhibit are two couplers which were submitted to service testing machines, with 30,000 operations. On Georgia avenue there are three locomotives and one freight car which are also equipped with the experimental type A and B couplers.

SUB-COMMITTEES OF ENTERTAINMENT COMMITTEE

The following sub-committees of the Entertainment Committee have been named to take charge of the various social functions during the conventions:

Door Committee—In charge of entrance to all entertainments: L. B. Sherman, Chairman; G. E. Ryder, C. L. McMaster, C. R. Berger, T. W. Illingworth, P. A. Bevan, C. R. King.

M. C. B. Social Gathering and Informal Dance—Wednes-

day evening, June 10th, at Marlborough-Blenheim. In charge of E. T. Hendee, Chairman; E. E. Silk, C. R. King, E. H. Bankard, Jr., F. K. Dunbar, Mrs. A. Fenton Walker, Harold Hegeman, P. A. Bevan.

M. C. B. Dance on Pier—Thursday evening, June 11th. In charge of: Roger J. Faure, Chairman; J. M. Crowe, C. D. Jenks, G. E. Ryder, W. K. Krepps, Mrs. A. Fenton Walker, Harry F. Lowman.

Card Party on Pier—Friday afternoon, June 12th. In charge of: C. D. Jenks, Chairman; W. K. Krepps, C. D. Eaton, G. R. Carr, F. K. Dunbar, L. B. Sherman.

M. C. B. Concert on Pier—Friday Evening, June 12th. In charge of: C. D. Eaton, Chairman; Harold Hegeman, J. M. Crowe, E. T. Hendee, C. R. Berger, E. H. Bankard, Jr., Harry F. Lowman.

M. M. Social Gathering and Informal Dance—Monday evening, June 15th, at Marlborough-Blenheim. In charge of C. D. Jenks, Chairman; C. D. Eaton, E. E. Silk, C. R. King, T. W. Illingworth, Geo. R. Carr, R. J. Faure, C. R. King.

M. M. Informal Dance on Pier—Tuesday evening, June 16th. In charge of: W. K. Krepps, Chairman; Harold Hegeman, J. M. Crowe, C. L. McMasters, G. E. Ryder, E. H. Bankard, Jr., Harry F. Lowman.

THE TRACK EXHIBITS

The Pennsylvania Railroad have on the exhibition track an all steel box car and examples of its newest Atlantic, Pacific and Mikado type locomotives, while the Reading, a block nearer the pier, is showing one of its new superheater 8-wheel locomotives.

M. C. B. SOCIAL GATHERING

About 200 enjoyed the social gathering and informal dance at the Marlborough-Blenheim last evening. The affair was in charge of a committee with E. T. Hendee as chairman. The other committee members were E. E. Silk, C. R. King, E. H. Bankard, Jr., F. K. Dunbar, Mrs. A. Fenton Walker, Harold Hegeman, P. A. Bevan.

GOLF TOURNAMENT ON SUNDAY

In view of the increasing interest in the game of golf throughout the country the entertainment committee of the Railway Supply Manufacturers' Association for the 1914 conventions has made arrangements for holding a convention golf tournament, open to all railway and supplymen. It is expected, from assurances already given, that there will be fully 100 entries for the event. Through the kindness of the Country Club of Atlantic City the tournament will be held on the links of that organization and the date is Sunday, June 14. The club links are easy of access by automobile, carriages, or the Shore Fast Line electric cars, leaving from Boardwalk and Virginia Avenue, also by the Atlantic City and Suburban Traction Company's cars from Boardwalk and Florida Avenue.

The events will consist of an 18-hole medal play handicap contest and a blind score 18-hole contest to be played in conjunction with the handicap medal score event. The eighteen holes may be played either Sunday morning or afternoon, at the option of the players. Entries may be made at the first tee with E. H. Bankard, Jr., a member of the entertainment committee, or preferably on the Steel Pier before that time with either Mr. Bankard, C .D. Jenks or L. B. Sherman, at the office of the Daily Railway Age Gazette. When the players arrive at the first tee they will please give their club handicap to Mr. Bankard; if they are unattached players a handicap will be given them. The regular green fee will be charged.

Prizes will be awarded for low net 18-hole medal play and for the blind score event. It is hoped the event will become an annual affair.

ADDITIONAL MASTER CAR BUILDERS' REGISTRATION

Acker, C. B., Car Foreman, Pittsburgh, Shawmutt & Nor., Lexington.
Acker, Chas. J., Master Mechanic, Toledo Terminal, Lexington.
Adams, T. E., S. M. P., St. L. Southwestern, Traymore.
Akans, E. L., M. M., V. & S. W., Lexington.
Akans, Geo., M. M., Southern, Lexington.
Albers, L. H., Supervisor Air Brakes, N. Y. C. & H. R., Marlborough-Blenheim.
Alquist, Peter, S. C. D., M. K. & T., Haddon Hall.
Alter, Wm., G. F. C. D., Central R. R. of N. J., Edison.
Anthony, F. S., S. M., Texas & Pacific Traymore.
Appler, A. B., M. E., Dela. & Hudson, Marlborough-Blenheim.
Averill, E. A., Standard Stoker Co., Shelburne.
Ayers, A. R., G. M. E., New York Central Lines W., Marlborough-Blenheim.
Barba, C. E., Asst. Engineer, Penna., Haddon Hall.
Barnum, M. K., C. M. I., C. H. & D., Marlborough-Blenheim.
Baron, Jacob, C. I., Ky. & Ind. Terminal, Lexington.
Beaghen, Thos., M. C. B., Union Tank Line, Traymore.
Beattie, J. A., Supt., McKeesport Connecting, Seaside.
Beaumont, H. A., G. F. C. S., B. & O., Dennis.
Bell, R. W., G. S. M. P., Ill. Cent., Shelburne.
Bentley, W. F., M. C. B., B. & O., Shelburne.
Blackmon, Mr. G. A., Gen'l Supt., Louisville & Beaver River, Pennhurst.
Blair, H. A., G. C. I., Baltimore & Ohio, Haddon Hall.
Bottomly, Edw. S., Chief Joint Car Inspector, Ct. & P. R., Lexington.
Boutet, H., Chief Joint Inspector, All Lines, Shelburne.
Bowden, J. F., Dist. S. M. P., B. & O., Shelburne.
Boyden, N. N., M. M., Southern Ry., Shelburne.
Boyer, Chas. E., Gen. Car. Inspector, Penna., Runnymede.
Breyer, J. S., M. M., Southern, Lexington.
Brown, M. G., S. M. P., Gulf & Ship Island, Haddon Hall.
Burnett, R. W., G. M. C. B., Canadian Pacific, Marlborough-Blenheim.
Buzzell, O. D., F. C. D., A. T. & S. F., Chalfonte.
Calkins, A. E., Asst. to S. R. S., H. Y. C. & H. R., Strand.
Carr, W. K., G. C. I., Norfolk & Western, Traymore.
Carroll, J. T., A. G. S. M. P., B. & O., Marlborough-Blenheim.
Carson, G. E., D. M. C. B., N. Y. C. & H. R., Traymore.
Case, S. T., Special Inspector, N. Y. C. & H. R., Pennhurst.
Caton, S. W., Gen. Car Inspr., Western Maryland, Monticello.
Chaffee, F. W., G. C. I., N. Y. C. & H. R., Traymore.
Chamberlain, J. T., Past President, Shelburne.
Chambers, C. E., S. M. P., Central R. R. of N. J., Dennis.
Chubb, A. J., Chief Inspector Car Dept., Pere Marquette, Chalfonte.
Clark, F. H., G. S. M. P., B. & P., Marlborough-Blenheim.
Clark, J. H., Supt., Staten Island Rapid Transit Ry., Marlborough-Blenheim.
Clerk, J. J., M. M., Tennessee Central, Dunlop.
Coleman, Jas., Supt. Car Dept., Grand Trunk, Dennis.
Cook, T. R., A. E. M. P. Penna. Lines (West), Brighton.
Copony, Alfred, M. C. B., Grand Trunk, Traymore.
Cornith, A. B., Gen. Inspector, A. C. L., Lexington.
Courson, J. F., G. D. Wall Shop, Penna., Seaside.
Craig, James, Chief Draftsman, B. & M., Alamac.
Cromwell, O. C., M. E., B. & O., Marlborough-Blenheim.
Cromwell, S. A., Supt. Trans. Supplies and Expenses, B. & O., Haddon Hall.
Crownover, S. M., S. M. P., Chicago Great Western, Dennis.
Cyr, J. W., S. H. P., C. B. & Q., Strand.
Darlow, A. M., S. M. P., Buffalo & Susquehanna, Chalfonte.
Davis, M. J., A. E. M. P., Penna., Chalfonte.
Davis, W. H., M. E., N. Y. O. & W., Chalfonte.
Deeter, D. ., Gen. M. M., P. & R., Jackson.
Demarest, T. W., S. M. P., Penna. Lines, Brighton.
Deyot, Frank, A. G. F., N. Y. C. & H. R., Pennhurst.
Dickinson, F. W., M. C. B., Bessemer & Lake Erie, Lexington.
Donehue, Thos., Div. Gen. Car Fore., N. Y. C. & H., Haddon Hall.
Dunham, W. E., Supervisor M. P. & M., Chicago & North W. Marlborough-Blenheim.
Eberle, Wm. F., G. F., Penna., Chalfonte.
Elmer, Wm., S. M. P., Penna. Chalfonte.
Endsley, Prof. L. E., Purdue University, Chalfonte.
England, Robert H., G. H., Kanawha & W. Va., Haddon Hall.
Ettinger, R. L., C. M. E., Southern Ry., Dennis.
Ewing, J. J., M. E., Chesapeake & Ohio, Haddon Hall.
Ewold, Wm., M. C. B., Cumberland & Penn., Ebbitt House.

Felton, Henry E., President Union Tank Line Co., Traymore.
Ferguson, Geo. M., Supt., Lake Terminal, Seaside.
Fitzmorris, Jas., M. M., Chicago Junction, Lexington.
Fowler, G. L., Dennis.
Fryer, C. V., G. F. C. D., N. Y. C. & W., Chalfonte.
Gardner, G. C., A. E. M. P., Penna., Marlborough-Blenheim.
Garstang, Wm., Retired G. M. C. B., C. C. C. & St. Louis, Marlborough-Blenheim.
Gernert, Henry, F. C. D., Cent. R. R. of N. J., Edison.
Givin, E. F., M. E., P. S. & N., Lexington.
Givin, E. F., M. M., P. S. & N., Lexington.
Gould, Jos. E., Chalfonte.
Gould, R., Jr., Retired, C. & O., Dennis.
Graff, F. M., Special Agt. Mech. Dept., Erie, Traymore.
Gray, B. H., S. M. P., New Orleans, Mobile & Chic., Monticello.
Grewe, H. F., M. M., Wabash, Pittsburgh Terminal, Deville.
Grieves, W. E., Marlborough-Blenheim.
Hainen, J., S. M. P., Southern, Shelburne.
Halbert, M. W., C. I. I., American Assn. of R. R. Supts., Haddon Hall.
Hall, W. H., C. C. I., C. R. R. of N. J., Arlington.
Hamilton Tabor, M. M., Cumberland Valley, Chalfonte.
Harris, C. M., M. M., Washington Terminal Co., Traymore.
Hendry, John, M. C. B., Grand Trunk, Traymore.
Hempton, J. N., F. C. D., A. C. L., Lexington.
Henry, V. C. A., S. M. P., Penna. Lines (West), Chelsea.
Hubbell, I. C., Buyer, Kansas City, Mexico & Orient, Marlborough-Blenheim.
Hystrom, K. F., Chief Draftsman, Grand Trunk, Craig Hall.
Jackson, O. S., S. M. P., Chicago, Terre Haute & Southern, Marlborough-Blenheim.
Johnson, Frank, M. M., Southern, Lexington.
Jones, L. B., A. E. M. P., Penna. Lines West, Brighton.
Kaderly, W. F., Gen. Supt., G. S. & F., Marlborough-Blenheim.
Kantmann, A. C., S. M., Nashville, Chattanooga & St. L., Chalfonte.
Kearney, A., A. S. M. P., N. & W., Marlborough-Blenheim.
Kent, F. S., G. C. I., Penna., Marlborough-Blenheim.
Kinney, M. A., S. M. P., Hocking Valley, Traymore.
Kelly, J. P., C. A. B. E., N. Y. C. & H. R., Chalfonte.
Kinter, D. H., G. F. C. D., Monongahela, Watkins.
Kipp, A. G. C. I., N. Y. O. & W., Traymore.
Kleine, R. L., G. C. I., Penna., Dennis.
Knox, W. J., M. E., B. R. & P., Brighton.
Lide, Chas. D., M. M., C. & N. W., Lexington.
Luscombe, J. T., M. M., B. & O., Traymore.
Lynn, Samuel, M. C. B., P. & L. E., Pennhurst.
Maddox, C. W., C. C. I., Ches. & Ohio, Chalfonte.
Manning, J. H., S. M. P., Del. & Hudson Co., Marlborough-Blenheim.
Mather, A. C., Pres., Mather Stock Car Co., Traymore.
May, H. C., S. M. P., C. I. & L., Chalfonte.
McCully, B. N., F. C. D., N. Y. P. & N., Haddon Hall.
McCuen, J. P., Gen. Inspector, Q. & C. Route, Dennis.
McBride, B., M. M., Southern, Lexington.
McFeatters, F. R., Supt., Union R. R. St. Charles.
McIlvaine C. L. M. M. N. Y. P. & N. Brighton.
McKinsey C. R. G. C. I., P. B. & W., Runnymede.
McMullen, John, M. S., Erie, Traymore.
McNulty, F. M., S. M. P., Monongahela Connecting, Chalfonte.
Meister, C. L., M. E., Atlantic Coast Line, Dennis.
Mercur, R. E., T. M., Westmoreland Coal Co., Traymore.
Meredith H. P., M. M., Penna., Traymore.
Michael, J. B., M. M., Southern, Lexington.
Miller, E. A., S. M. P., N. Y. C. & St. L., Traymore.
Miller, E. B., D. M. C. B., B. & O. Lexington.
Millar, E. T., G. C. I., B & M., Alamac.
Miller, G. A., S. M. P., Florida East Coast, Sterling House.
Miller, R. S., M. C. B., N. Y. C. & St. L., Chalfonte.
Miller, Wm., Shop Supt., Erie, Chester Inn.
Milliken, Jas., S. M. P., Phila., Balt. & Wash., Brighton.
Minick, Eli, G. F. C. R., Lehigh Valley, Monticello.
Monfee, A. J., M. M., Birmingham Southern, Schlitz.
Murrian, W. S., S. M. P., Southern, Shelburne.
New, W. E., M. M. K. C. Term., Monticello.
Nolan, J. P., M. M., M. L. & T. R. R. & L. W., Emmitt.
O'Brien, W. J., M. M. Kanawha & Michigan, Haddon Hall.
O'Dea, P. J., Gen. Inspector, Erie, Traymore.
O'Donnell, T. J., Arbitrator, Niag. & F. Car Ins., N. Y. C. Car Shops, Pennhurst.
Orchard, Jno. H., F. C. D., D. & H., Bothwell.
Painter, J. H., S. S., Atlantic Coast Line, Chalfonte.
Peiffer, Charles E., G. C. I., Buffalo, Rochester & Pittsburg, Brighton.
Perine, D. M., S. M. P., Penna., Traymore.
Pilcher, John A., M. E., N. & W., Traymore.
Prendergast, R. Q., Supt., Bangor & Aroostook, Chalfonte.
Rande, H. G., F. C. R., New Burg & South Shore, Monticello.
Rasbridge, H. B., Supt. Car. Dept., Phila. & Reading, Dennis.
Richards, C. F., Chief Car Inspector, Lehigh & Hudson River, Phila.
Rink, Geo. W., M. E., Cent. R. R. of N. J., Traymore.
Rommel, Geo., M. M., Phila. & Reading, Lexington.
Roope, Thos., S. M. P., Chicago, Burlington & Quincy, Traymore.
Sasser, E. C., M. M., Southern, Lexington.
Schackford, J. M., Chief Draftsman, D. L. & W., Marlborough-Blenheim.
Schlafge, Wm., Gen. Mech. Supt., Erie, Marlborough-Blenheim.
Schmoll, G. A., S. M. P., B. & O., Marlborough-Blenheim.
Sheafe, J. S., M. M., Staten Island Rapid Transit, Dennis.
Sisco, G. E., A. E. M. P., Penna., Chalfonte.
Sitterly, W. H., Gen. Car Inspector, Penna., Traymore.
Slayton, F. T., S. M. P., Virginia, Arlington.
Slayton, C. E., Asst. Supt., St. Joseph & Grand Island, Arlington.
Smith, A. E., A. M. C. B., Union Tank Line, Traymore.
Smith, H. R., M. M., Chicago Indianapolis & Louisville, Haddon Hall.
Smith J. L., M. M., Pittsburgh, Shawmut & Northern, Lexington.
Smith, R. E., G. S. M. P., Atlantic Coast Line, Chelsea.
Staley, H. F., M. M., Carolina Clinchfield & Ohio, Traymore.
Stark, F. H., S. R. S., Montour Railroad, Chalfonte.
Stewart, A., G. S. M. P., Southern, Marlborough-Blenheim.
Streeter, L. P., A. B. E., Ill. Cent. Chalfonte.
Sumner, Eliot, M. M., Penna., Chalfonte.
Sweetman, E. H., M. M., Southern, Private Car.
Symons, W. E., Consulting Engineer, Lake Erie, Franklin & Clarion, Chalfonte.
Tatum, J. J., S. F. C. D., B. & O., Chelsea.
Terrell, C. H., Asst. S. M. P., Ches. & Ohio, Haddon Hall.
Thomas, I. B., S. M. P., Northern Central, Chalfonte.
Thomson, S. G., S. M. P., P. & R., Lennox Apts.
Thorn, W. H., M. C. B., C., St. P. M. & O., Chalfonte.
Tinker, J. H., S. M. P., C. & E. I., Traymore.
Turnbull, R. J., S. M., Mo. Pac., Marlborough-Blenheim.
Vaughan, H. H., Asst to V. P., Can. Pac., Marlborough-Blenheim.
Wahlen, John, M. M., Montpelier & Wells River, Arlington.
Wallis, J. T., G. S. M. P., Penna., Chelsea.
Walsh, F. O., S. M. P., Ga. R. R., Strand.
Waters, J. J., S. M. P., Pere Marquette, Marlborough-Blenheim.
Webb, E. R., M. M., Michigan Central, Lexington.
Wright, O. C., A. E. M. P., Penna. Lines West, Marlborough-Blenheim.
Wyman, R. L., M. M., Lehigh & New England, Pennhurst.
Yergy, J. P., G. C. I., Penna., Dennis.

ADDITIONAL MASTER MECHANICS' REGISTRATION

Adams, T. E., G. M. M., St. L. & S. F., Traymore.
Akans, E. L., M. M., V. & S. W., Lexington.
Akans, George, M. M., Southern, Southern Ry. Car.
Anthony, F. S., S. M., Texas & Pacific, Traymore.
Appler, A. B., M. E., Dela. & Hudson, Marlborough-Blenheim.
Averill, E. A., Standard Stoker Co., Shelburne.
Ayers, A. R., G. M. E., N. Y. C. Lines West, Marlborough-Blenheim.
Barnum, M. K., G. M. I., B. & O., Marlborough-Blenheim.
Bayley, J. J., M. M. Southern, Sterling.
Beamer, Jas. A., M. M., Penna., Chalfonte.
Bell, J. Snowden, Associate Member, Jackson.
Bell, R. W., G. S. N. P., Ill. Cent., Shelburne.
Breyer, J. S., M. M., So., Lexington.
Brown, M. G., S. M. P., Gulf & Ship Island, Haddon Hall.
Carroll, J. T., A. G. S. M. P., B. & O., Marlborough-Blenheim.
Chambers, C. E., S. M. P., C. R. R. of N. J., Dennis.
Clark, F. H., G. S. M. P., B. & O., Marlborough-Blenheim.
Clark, H. J., M. M., Staten Island Rapid Transit, Marlborough-Blenheim.
Cole, F. J., C. C. E., American Locomotive Co., Marlborough-Blenheim.
Cook, T. R., A. E. M. P., Penna. Lines, Brighton.
Cox, Millard F., Asst. Supt. Machinery, L. & H., Chalfonte.
Cromwell, O. C., M. E., B. & O., Marlborough-Blenheim.
Crownover, G. M., S. M. P., Chicago, Gt. West., Dennis.
Cyr, J. W., S. M. P., C. B. & O., Strand.
Daley, W. W., M. M., N. Y., O. & W., Traymore.
Darlow, A. M., S. M. P., B. & S., Chalfonte.
Deeter, D. H., M. M., Phila. & Reading, Jackson.
Demarest, T. W., S. M. P., Penna. Lines (West), Brighton.
Dunham, W. E., S. M. P., C. & N. W., Marlborough-Blenheim.
Elmes, C. C., Asst. Engr. M. P., P. & R., Brighton.
Elmer, Wm., S. M. P., Penna., Chalfonte.

Endsley, Prof. L. E., Purdue University, Chalfonte.
Ettenger, R. L., C. M. E., Southern, Dennis.
Ewing, J. J., M. E., Ches. & Ohio, Haddon Hall.
Fitzmorris, Jas., M. M., Chicago Jct., Lexington.
Fowler, Geo. L., Cons'l Engineer, Dennis.
Gardner, G. Clinton, G. F. M. P., Penna., Marlborough-Blenheim.
Gibbs, J. W., M. M., So. Ry., Lexington.
Gould, Jos. E., Chalfonte.
Gould, J. R., S. M. P., Ches. & Ohio, Dennis.
Gray, B. H., S. M. P., H. O. M. & C., Monticello.
Hainen, J., S. M. P., Southern, Shelburne.
Hamilton, Tabor, M. M., Cumberland Valley, Chalfonte.
Harris, C. H., M. M., Washington Terminal, Traymore.
Henry, W. C. A., S. M. P., Penna. Lines (West), Chelsea.
Horsey, A. W., M. E., Can. Pac., Marlborough-Blenheim.
Jackson, O. S., S. M. P., C. & H. & S. E., Marlborough-
Jaones, L. B. A. E. M. P., Washington Terminal, Traymore.
Johnson, Frank, M. M., Southern, Lexington.
Blenheim.
Kaderly, W. F., Gen. Spt., Ga., Lo. & Fla., Marlborough-Blenheim.
Kantmann, A. G., S. M., N. C. & St. L., Chalfonte.
Kearney, A. A., S. M. P., H. & W., Marlborough-Blenheim.
Kelly, J. P., C. A. B. E., N. Y. C. & H. R., Chalfonte.
Kiesel, W. F., A. M. E., Penna., Chelsea.
Kilpatrick, R. F., Chalfonte.
Kinney, M. A., S. M. P., Hocking Valley, Traymore.
Kuhn, W. T., Supt. Motive Power, T. H. & B., Traymore.
Lide, C. D., M. M., Carolina & N. W., Lexington.
Luscombe, J. T., M. M., B. & O., Traymore.
Manning, J. H., S. M. P., D. & H., Marlborough-Blenheim.
McBride, B., M. M., So., Lexington.
McCarthy, M. J., S. M. P., B. & O. S. W., Marlborough-Blenheim.
McCuen, J. P., Gen. Inspector, Q. & C., Dennis.
McIlvaine, C. L., M. M., N. Y. P. & N., Brighton.
McNulty, F. M., S. M. P., Monongahela Conn., Chalfonte.
Meister, C. L., M. E., A. C. L., Dennis.
Miller, Geo. A., S. M. P., Fla East Coast. Sterling.
Michael, J. B., M. M., Southern, Lexington.
Meredith, H. P., M. M., Penna., Traymore.
Miller, E. A., S. M. P., N. Y. C. & St. L., Traymore.
Milliken, Jas., S. M. P., Phila, Balt. & Wash., Brighton.
Monfee, A. J., M. M., Birmingham So., Schlitz.
Murrian, W. S., S. M. P., Southern, Shelburne.
New, W. E., M. M., Kansas City Terminal, Monticello.
Nolan, J. P., A. S., Morgans L. & Q. R. R. & S. Co., Emmitt.
O'Brien, Wm. J., M. M., Kanawah & Mich., Haddon Hall.
Owens, W. H., M. M., Southern, Sterling.
Painter, J. H., Supt. Shops, A. C. L., Chalfonte.
Perine, D. M., S. M. P., Penna., Traymore.
Pilcher, John A., M. E., M. & W., Traymore.
Pomeroy, L. R., Consulting Engineer Traymore.
Porter, C. D., Asst. Eng. M. P., Penna., Chalfonte.
Powers, M. J., M. M., Denver & Rio Grande, Arlington.
Prendergast, R T., S. M. P., B. & O., Chalfonte.
Rink, Geo. W., M. E., C. R. R. of N. J., Traymore.
Rusling, W. J., M. M., Northern Cent., Chalfonte.
Sasser, E. C., M. M., Southern, Lexington.
Schlafge, Wm., G. M. S., Erie, Marlborough-Blenheim.
Sheafe, J. S., M. M., Staten Island Rapid Transit, Dennis.
Sisco, G. E., A. E. M. P., Penna. Lines, Chalfonte.
Slayton, C. E., A. S., St. Jos. & Grand Island, Arlington.
Slayton, F. T., S. M. P., Virginian, Arlington.
Smith, Jno. L., M. M., P. S. & N., Lexington.
Smith, M. R., M. M., Chicago, Indianapolis & Louisville, Haddon Hall.
Smith, R. E., G. S. M. P., A. C. L., Chelsea.
Staley, H. F., M. M., Caro., Clinchfield & Ohio, Traymore.
Stewart, A. G. S. M. P., Southern, Marlborough-Blenheim.
Streeter, L. P., Air Brake Engineer, Illinois Central, Chalfonte.
Sumner, Eliot, M. M., Penna., Chalfonte.
Symons, W. E., Consult. Eng., Lake Erie, Franklin & Clarion, Chalfonte.
Sweetman, E. M., M. M., Southern, Private Car.
Terrell, C. H., Asst. S. M. P., Ches. & Ohio, Haddon Hall.
Thomas, H. T., M. M., Detroit & Mackinac, Haddon Hall.
Thomas, I. B., S. M. P., Penna., Chalfonte.
Thomas, J. J., Jr., S. P., Mobile & Ohio, Strand.
Thomas, J. J., S. M. P., Southern Ry. in Miss., Strand.
Thomson, S. G., S. M. P., Phila. & Reading, Lennox.
Tinker, J. H., D. M. M., C. & E. I., Traymore.
Vaughan, H. H., Asst. V. P., Can. Pac., Marlborough-Blenheim.
Wahlen, John. M. M., Montpelier & Wells River, Arlington.
Waters, J. J., S. M. P., Pere Marquette, Marlborough-Blenheim.
Wieseckel, G. F., M. M., W. M., Grand Atlantic.
Wright, O. C., A. E. M. P., Penna. Lines (West), Marlborough-Blenheim.
Wyman, R. L., M. M., L. & N. E., Pennhurst.

ADDITIONAL MASTER CAR BUILDERS' GUESTS

Alford, Fred, Shelburne.
Ashby, J. M., Chief Car Inspector, N. Y., P. & N., Monticello.
Atkinson, C. R., Stenographer to G. S. M. P., Penna., Netherland.
Bany, J. J., M. M., Norfolk & Western, Strand.
Barry, Frank J., Gen'l Inspector Air Brakes, N. Y. O. & W., Traymore.
Bashford, E. E., Gen. Pur. Agt., National Rys. of Mexico.
Battenhouse, Wm., Gen. Car Foreman, B. & O. R. R., Pgh., Haddon Hall.
Bayley, J. J., M. M., Southern Ry., Sterling.
Beamer, Jas. A., M. M., Penna., Chalfonte.
Bell, J. Snowden, Associate Member, Master Mechanics' Ass'n, Hotel Jackson.
Belnap, H. M., Chief Inspector Safety Appliances, Interstate Commerce Comm., Haddon Hall.
Berg, J. V., L. S. & M. S., Pennhurst.
Berger, Aloysius N., Draughtsman, Penna., Westminster.
Beaumont, Mr. A. H., Retired, B. & O., Elwood.
Borell, Elmer H., Gen'l Air Brake Inspector, P. & R., Albemarle.
Brenneman, A., Engineer, Penna., Victoria.
Bunnell, F. O., Eng. of Tests, C. R. I. & P., Dennis.
Burns, N. F., Special Inspector, N. Y. C. & H. R. R.
Busse, F. W., Chief Clerk to T. S. M. P., B. & O., Strand.
Butts, G. W., Ass't M. M., Penna., Chalfonte.
Carson, John D., Asst. Reporter, Runnymede.
Chambers, James, Dennis.
Clarke, C. M., Attorney, Seaside.
Coan, Michael, Foreman Car Inspector, Philadelphia & Reading, Sterling.
Cole, F. J., C. C. E., American Loco. Co., Marlborough-Blenheim.
Collin, J. B., Draughtsman, Penna., Haddon Hall.
Conen, J. J., Foreman Shops, B. & O., Netherlands.
Corbett, James, Chief Clerk to D. G. C. Foreman, N. Y. C. & H. R. R., Somerset.
Coulter, A. F., G. C. Foreman, Union R. R., Chanlon.
Cox, M. F., Asst. Supt. Machinery, L. & N., Chalfonte.
Davis, James P., General Freight Agt., McKeesport Connecting, Seaside.
Davis, Marion B., McKeesport Connecting, Seaside.
Deats, G. W., M. M., T. & P., Marlborough-Blenheim.
Dildine, J. A., Chief Clerk M. P. Dept., Penna. Lines, Traymore.
Dillon, Mr. E., General Foreman, Central Vermont, Lexington.
Doley, W. W., M. M., N. Y., O. & W., Traymore.
Douglas, Mr. Chas. E., Pensioner, N. Y., N. H. & H., Pennhurst.
Drawbaugh, E. L., Chief Car Inspector, C. V., Monticello.
Elliott, E. O., Chief Draughtsman, P. & R., 5703 Atlantic Ave.
Elliott, W. H., Signal Engineer, N. Y. C. & H. R., Marlborough-Blenheim.
Ellis, W. M., Foreman Car Dept., Ala. Great Southern, 15 Penna. Ave.
Ellsworth, G. W., Chief Motive Power Clerk, Penna., Runnymede.
Elmes, C. C., Ass't Engr. M. P., P. & R., Brighton.
Farlling, E. S., Ass't Division General Foreman, N. Y. C. & H. R., Erie R. R.
Fosnot, G. N., C. C. to M. M., C. V., Chalfonte.
Fox, P., General Foreman Car Repairs, Erie, Shelburne.
Fritsch, J. A., Foreman Car Shops, Penna., Lexington.
Gainey, J. J., M. C. B., C. & O. T. P., Chalfonte.
Gallagher, G. A., M. M., Ill. Southern, Haddon Hall.
Gibbs, J. W., M. M., So. Ry., Lexington.
Gonnerman, W. K., Gen. Car Foreman, B. & O., Lexington.
Grantier, L. N., Motive Power Inspector, B. & O., Carnix.
Greathouse, L., Ass't Gen. Car Inspector, Virginian, Beachwood.
Crossman, T. E., Official Reporter, Dennis.
Gutteridge, J., Div. Car Foreman, K. C. S., Dunlop.
Hampton, Kane, Chief Joint Inspector, Atlantic R. R. Co., Larchmont.
Hargreaves, George, Draughtsman, M. E., Penna., Haddon Hall.
Hayes, C. J., Clerk Car Dept., N. Y. Central, Alpine.
Hedrix, C. E., Supt. St., J. & G. I., Arlington.
Hengstler, David, Foreman Car Repairs, Silver Dale Cattage.
Hitch, C. W., General Car Inspector, C. B. & D., Lexington.
Holzemer, J. F., Pur. Agt., K. & M., Strand.
Horsey, A. W., M. E., Can. Pac., Marlborough-Blenheim.
Howardell, George S., Supt., Braden Copper, Westminster Ave.

Hunt, R. B., Mechanical Engineer, Florida East Coast, Sterling House.
Hutchinson, William M., Vice-President Union Tank Line, Union Tank Line, Traymore.
Jellison, B. T., P. Agent, C. & O., Marlborough-Blenheim.
Johnson, W. H., Superintendent, Winston-Salem Southbound, Marlborough-Blenheim.
Jones, Donald T., N. Y. C. & H. R., Chalfonte.
Jones, Geo. R., N. Y. C. & H. R., Chalfonte.
Jones, W. F., General Storekeeper, N. Y. C. & H. R., Chalfonte.
Kapp, J. B., Asst. M. M., Penna., Iroquois.
Kauffman, G. B., Passenger Agent, P. & R.
Kern, Wm., Foreman Loco. Dept., Baltimore & Ohio, Strand.
Kiesel, W. J., A. M. E., Penna., Chelsea.
Kimmett, A. D., M. M. L. & W. V., Arondale.
Kinney, W. H., Master Mechanic, N. Y., O. & W., Traymore.
Lee, F. H., Gen. Piece Work Inspector, B. & O., Dunlop.
Liebegott, George H., Mich. Eng. Dept., Penna., Haddon Hall.
Lynch, George, Chief Joint Inspector, over all Lines, Cleveland, Ohio, Borton.
Lowther, H., Asst. P. A., D. L. & W., Craig Hall.
Lowther, D. F., D. L. & W., Craig Hall.
Mallory, Mr. C. E., Supt. and Traffic Mgr., Kingan Refrigerator Line, Traymore.
Mahan, J. W., M. M., H. & W. Va., Haddon Hall.
McCarthy, M. J., S. M. P., B. & O. S. W., Marlborough-Blenheim.
McMunn, W. R., Chief Clerk, Supt. Rolling Stock, N. Y. C., Shelburne.
Meekins, F. P., Foreman, C. R. R. of N. J., Arondale.
Miles, C. J., Gen. Manager, Dond Stock Car Co., Traymore.
Milholland, J. K., General Foreman, B. & O.
Mills, L. W., Chief Clerk to S. M. P., M. K. & T., Chalfont.
Miller, R. E., Draftsman, M. E., Penna. R. R., Haddon Hall.
Nicholas, L., Federal Inspector, Interstate Commerce Commission, Somerset.
Morse, Frank W., Ex. Grand Trunk, Marlborough-Blenheim.
Moyer, Mr. F. A., Gen. Master Boiler Maker, So. Ry., Lexington.
New, Mr. Fred, Kansas City Terminal, Monticello.
Nolan, R. P., M. L. & T., Alamac.
Norris, J. C., Foreman Carpenter Shop, Cumberland Valley, Monticello.
O'Gilvie, James, Mechanical Expert, Board of Ry. Commissioners, Dunlop.
Owens, W. H., M. M., Southern, Sterling.
Porter, C. D., Asst. Eng. M. P., Penna., Chalfonte.
Potterger, J. P., Store Keeper, Penna., Haddon Hall.
Powell, William G., Draughtsman, Penna., Pennhurst.
Powers, M. J., M. M., Denver & Rio Grande, Arlington.
Page, S. D., Gen. Car Foreman, B. & A., Lexington.
Peterson, E. W., B. & A., Pennhurst.
Reichmann, T. J., Prest. & Gen. Manager, Streets Western Stable Car Line, Traymore.
Reilly, Thos. E., Spec. Agt. Office Supt. Freight Tran., W. J. & Seashore, Chelsea.
Renner, B. W., Ass't Gen. Foreman, Penna., Chalfonte.
Robbins, Jr., Master Felix M., Marlborough-Blenheim.
Robertson, H. M., Shop Supt., Northern Pacific, Strand.
Roof, C. S., Lexington.
Runkle, David, Foreman Car Shop, P. & R., Summitt.
Rushing, W. J., M. M., Northern Central, Chalfonte.
Sandman, H. G., Chief Draughtsman, B. & O. Haddon Hall.
Sheesley T. H., Traveling Engineer, Pena., Victoria.
Simon, L. S., Supply Dept., Fort North Terminal, Chelsea.
Skilling, J. K., Special Accountant, B. & O. R. R., Haddon Hall.
Smith, J. C., General Foreman, West Maryland Lines, Grand Atlantic.
Smith, R. J., D. F. & P. Solicitor, So. Pac., 112 S. Jackson Ave.
Spengler, E. A., Asst. Road Foreman of Engines, Penna.
Tatum, C. R., B. & O., Chelsea.
Tilford, Mr. Elliott A., C. N. O. & T. P., Marlborough-Blenheim.
Tilford, H., P. H., C. N. O. & T. P. & H. G. S., Marlborough-Blenheim.
Todd, David, Div. Pass. Agent, Penna., Morton.
Trantman, A., Shop Supt. Car Dept., Erie, Shelburne.
Vought, Harry D., Sec. N. Y. & Central R. R. Clubs, Marlborough-Blenheim.
Wallace, L. V., Associate Professor, Chalfonte.
Warner, E. H., Draftsman, M. E., Penna., Haddon Hall.
Way, E. S., Genl. Foreman M. C. B. Clearing House, Penna., Runnymede.
Weedemann, J. E., Car Dept., N. Y. C. & H. R., Arlington.
Weitzel, H., A. S. M. D., Arizona Eastern R. R., Traymore.
Wieseckel, G. T., M. M., W. M. R. R., Grand Atlantic.
Williamson, C. B., Supt. Chesapeake Western, Marlborough-Blenheim.
Wilson, D. H., Gen. Foreman Shops, F. & E. C., Sterling.
Wilt, W. L., Chief Clerk, Penna. Lines West, Dennis.
Woollatt, Norman, M. C. B. Bill Clerk, B. & O. Dunlop.
Zimmermann, G. W., Foreman Car Shops, P. & R., Somerset.
Zwight, Silas, Genl. M. M., Northern Pacific.

DISILLUSIONMENT

EDMUND H. WALKER

(With apologies to Tom Daly.)

You evra see da trav'lan man?
Oh, how I weesh for dat!
For ride all day een Pullman car,
An' wear dose fuzzy hat.

For stopa at da beeg hotel,
An' seet een easy chair,
An smoke an' puff on beeg segar—
For nutting, notta care.

I theenk hee's nutting else to do
But sell da begga bill,
Den dreenk da cocktail at da bar,
An' planta eat hees fill.

An' go to show most evra night,
Or baseball game een day,
An' charge eet een expanse account—
Hees firm they gotta pay.

Weed great beeg diamond een hees shirt,
An' clean shave on hees face,
Hee's leeving high, just like a King,
Weed sweatheart een each place.

I weesh so much for soocha snap,
I try so hard I can,
An' last month, Presto! What you theenk?
I'm hire as trav'lan man.

So proud I am; my wife she's say
She's glad she's marry me,
An' gatting soocha smarta man—
You bat she oughta be.

I s'pose you theenk I'm happy man—
You wait 'till I am through.
Dees job ees notta softa snap
You theenk. I tella you!

I walk da street da whole day long,
Weed great beeg sampla case;
An' evra time I ask for man
Hee's een in othra place.

So far I no sell one a theeng.
I'm tire' from feet to head.
I theenk I gotta bumma line;
I weesh dat I was dead.

No cocktail-baseball-picture show,
No diamond ring or hat.
De boss hee's cut expanse account
All soocha theeng as dat.

Oh my! I weesh I had my job
Een ditch, or sawing wood,
For now da boss hee's telegraph:
"Come in! You're no dam good!"

Conventionalities

The printed list of representatives of the Hutchins Car Roofing Company should have included D. W. Hawksworth, the company's vice-president.

There is considerable speculation as to where C. H. Gayetty of the Quaker City Rubber Company, is living. He is registered at the Traymore, but Mrs. Gayette and the baby are stopping at a cottage in Atlantic City.

Walter A. Johnson, formerly manager of the Atlanta office of the Independent Pneumatic Tool Company, has been made

W. F. Jones, General Storekeeper of the New York Central

manager of the pneumatic tool department of Pittsburgh office of the Ingersoll-Rand Company. Mr. Johnson arrived Tuesday.

F. R. McFetters, superintendent of the Union Railroad, is slightly lame, and requires the use of a cane as the result of an automobile accident on Memorial Day. Fortunately the members of his family who were with him escaped without injury.

John Chamberlin, was on the Pennsylvania special from New York Tuesday afternoon, but the umbrella that made him famous was not to be seen. It is rumored that it is preserved among the relics of famous men in the revolutionary museum at Boston.

The easiest way is to put it onto the camera man. He shot up R. J. Kelly, general foreman of the car department, Long Island R. R., Morris Park, N. Y., when he thought he had his sights trained on W. H. Flynn, S. M. P. of the Michigan Central.

The friends of J. W. Hathaway, of the Union Draft Gear Company, are recommending to conventionites the use of the "Hathaway" fizz. Why this particular but harmless concoction should be recommended is a secret among the aforesaid friends. All they will say about it is that it hath a way all its own.

Charles D. Jenks, of Edwin S. Woods & Company, a member of the entertainment committee, is recovering from an ankle sprain sustained some time ago. Mr. Jenks will do his full share of work on his committee, although his efforts will be slowed up somewhat for obvious reasons. He is registered at the Dennis, as usual.

W. H. Flynn, the superintendent of motive power of the Michigan Central, whose likeness got mixed up with that of Mr. Kelly in yesterday morning's issue of the Daily, is delighted with his new offices in the Michigan Central terminal at Detroit. They are a wonderful improvement over the quarters which he formerly occupied.

Stephen C. Mason, of the McConway & Torley Company, will not arrive at Atlantic City until next Sunday. His son, Raymond, graduated from a military school at Stanton, Va., this week and Mr. Mason is attending that commencement exercise. Raymond Mason will probably continue his studies at the Carnegie School of Technology at Pittsburgh.

The spirit of rivalry between the Chicago & North Western and the Chicago, Milwaukee & St. Paul was well illustrated yesterday by the comments of Mr. Pratt when a vote was being taken on accepting the gavel which was presented to the association by a car repairman at Kansas City. He said: "I want to go on record by saying that the end of that gavel looks like a contracting chill. We don't want anything that the Milwaukee road has."

L. R. Pomeroy is attending the conventions this year in a new capacity. He has just accepted an appointment as manager of the New York sales office of the United States Light & Heating Company. During the past year he has been engaged in some exceedingly interesting consulting work in connection with the equipment of a large locomotive and car repair plant and in the valuation of rolling stock for another of the large railways.

Oscar F. Ostby, the chairman of the exhibit committee, is justly entitled to a very considerable amount of commendation

Left to Right: C. F. Giles, Superintendent of Machinery, Louisville & Nashville; J. W. Fogg, Master Mechanic, Baltimore & Ohio Chicago Terminal

for the remarkably successful exhibition this year. That he is something of a booster may be gained from the following paragraph which is taken from the Wednesday morning issue of the Atlantic City Review and is the result of his hypnotic influence on the reporter who interviewed him: "There are over 300 exhibitors on the pier, with machines that will do labor never dreamed of, so far back that some us can't remember it. There are giant planes that will slice cast iron as easily as you could sharpen a lead pencil; or smaller hoists which will lift machine parts weighing two tons."

William Schlafge, general mechanical superintendent of the Erie, is being congratulated this year on having under his charge the largest locomotive in the world. This is the triplex compound which employs the weight of the tender for adhesion,

and which was recently completed for the Erie by the Baldwin Locomotive Works. It is intended for pusher service. In a recent tryout near Philadelphia it met with an accident due to striking an overhead bridge because of the clearance not being sufficient. The damage was very slight and was soon repaired, but in a newspaper account of the happening it was described as a boiler explosion and the statement was made that a second explosion was narrowly averted by the heroic efforts of the engine crew.

E. M. Grove, of the ex-presidents of the R. S. M. A., comes back to us looking unusually brown, the result of a fishing trip. He spent two weeks in the Lake of Bays District of Canada, where he says the stars are twice as large as they are here in the states. Mr. Grove also says if one is looking for the roughs of "Roughing it" the Lake of Bays is not the place. Everything is perfect from eating to air and scenery. He caught a two-pound speckled trout which his friends urged him to have skinned and stuffed, but Mr. Grove says the history of a stuffed fish is that of hanging for one year in the dining room, the second year in the garret, the third year in the cellar and the fouth year in the garbage box. So he declined.

Right to Left: C. A. Schroyer, Superintendent Car Department, Chicago & North Western; C. H. Jenkins, General Manager, Moran Flexible Steam Joint Company, Inc.

Undoubtedly the newest superintendent of motive power, as well as one of the youngest, attending the convention this year is W. T. Kuhn, of the Toronto, Hamilton & Buffalo. This road, which operates 100 miles and has 35 locomotives and 1,600 cars, on June 1 made Mr. Kuhn its first superitendent of motive power, his title before that time being master mechanic. Mr. Kuhn began his railway service as a machinist's apprentice on the Norfolk & Western. From May 1, 1888, to March 1, 1900, he was successively machinist, roundhouse foreman and assistant airbrake instructor of that road. Later he was connected with the Lake Shore & Michigan Southern as roundhouse foreman and mechanical inspector, and then with the Lake Erie & Western as assistant master mechanic. He has been master mechanic of the T. H. & B. since the latter part of 1911.

The steel car plant of the Canadian Pacific at Montreal, which was under construction at the time of the conventions last year, has since been completed and put in operation. This shop is under the direction of R. W. Burnett, general master car builder of the Canadian Pacific, and third vice-president of the M. C. B. Association. It is used exclusively for the construction of the steel frame box cars which are so extensively used on that road and also for the construction of steel passenger equipment. The shop equipment includes a number of special machines for preparing the material for the cars and also an arrangement of erecting frames for assembling, which greatly facilitates the work. The shop was designed for a capacity of ten freight cars per day in addition to the passenger car work, but it has been demonstrated that this can be materially increased when necessary.

F. F. Gaines, Superintendent of Motive Power, Central of Georgia

The story is too good to keep. It seems that one day last winter Mrs. Walter B. Leach happened to remark to her husband, that Mrs. So and So had determined to dress her several children alike so that she might the more easily keep track of them in a crowd. That set Walter to thinking; so in January, when all of his staff had collected for a periodical conference, he had each and every man go to a tailor to be measured for a suit. While they were wondering, Walter's troubles began. First, he tried to find a cloth that would suit seven different complexions; and after that had been determined he had to search Europe for enough material for seven suits. And so it happened with

J. S. Sheafe, the New Master Mechanic of the Staten Island Rapid Transit Railway

the ties and their socks and the hatbands. But he was finally rewarded—as even a glance at the Hunt-Spiller septette will confirm. They certainly look natty as they swarm in their booth in the Annex.

The conventions would not seem complete without the presence of William Garstang, who retired as general master car builder of the Big Four last December, after

Ira Everett, General Car Inspector, Lehigh Valley, South Bethlehem, Pa.

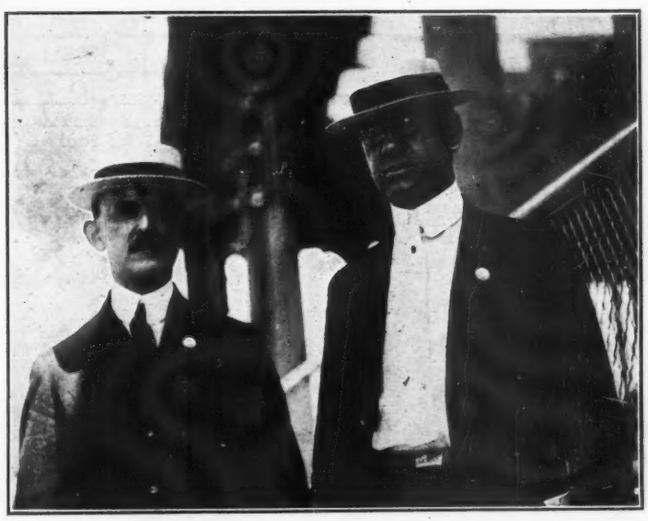
fifty years' continuous railway service. Mr. Garstang was also formerly superintendent of motive power of the Big Four and began attending the conventions about 1880. He has never attended a convention without bringing his family, and this year is accompanied by Mrs. Garstang, their eldest daughter, Mrs. F. M. Robbins and Felix Monroe Robbins, Jr., nine months old, and Miss Virginia Garstang. Mr. Robbins comes of an old southern family and is a civil en-

J. E. Keegan, Superintendent of Motive Power, Grand Rapids & Indiana

gineering graduate of Purdue University. He is now employed as county engineer of New Madrid county, Missouri. Mr. Garstang is a past president of the Master Mechanics' Association. He is now living in Indianapolis, and is enjoying a well earned rest, but says that after such an active life he will have to try find something to do to keep him out of mischief.

It is not a fact, as was mistakenly asserted in yesterday's Daily, that C. A. Schroyer of the Chicago & North Western has attended all the conventions for eighty-nine years, except those at Lakewood, N. Y. What it was meant to say is that, with the exception mentioned, Mr. Schroyer has attended all the conventions for twenty-nine years. The printer didn't know what a young man Mr. Schroyer is, or he never would have made that mistake. Another visitor who has attended all the conventions for twenty-nine years, with one exception, is E. W. Grieves. Mr. Grieves was elected third president of the M. C. B. Association when he attended his first conventions at Old Point Comfort in 1885. He was then superintendent of the car department of the Baltimore & Ohio. He was later elected successively second vice-president and first vice-president, and at Lakewood in 1892 he was elected president. He left the B. & O. in 1893 to go with the Galena-Signal Oil Company. The conventions he missed were those at Thousand Islands the first year the associations went there.

H. O. Keay, professor of transportation at McGill University, Montreal, is unable to be present this year owing to a press of work. Mr. Keay was formerly mechanical engineer of the



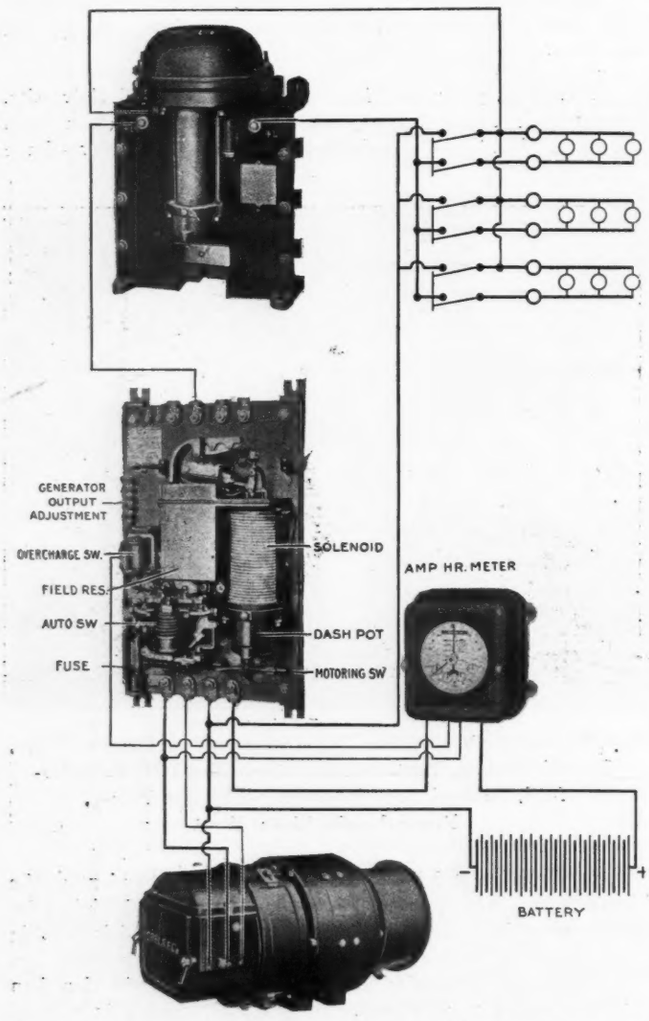
Left to Right: P. F. Smith, Superintendent of Motive Power, Central System, Pennsylvania Lines West; D. F. Crawford, General Superintendent of Motive Power, Pennsylvania Lines West

Boston & Maine and has been quite a regular attendant at the conventions. The transportation course at McGill University has been worked out largely by Professor Keay and is proving very successful in training young men for railway work. In this course the University has the co-operation of the Canadian railways and a regular course of practical training in railway work is thus provided for the students during their summer vacations and for a certain time after they graduate. The general manager of the Eastern Lines of the Canadian Pacific has recently issued a circular dealing with the course of instruction for transportation students and prescribing the length of time they are to work in the different departments and the course which they are to follow. The course is a general one dealing with all the departments of railway work, the idea being that by giving a man this general course, he will, when he decides on what branch of the work he wishes to follow, make a better all-around railroad man than if he had received his training entirely in one department. Mr. Keay has taken a very active interest in the work from the beginning and although the course has only been in operation a few years, a number of graduates are now holding responsible positions with the Canadian roads.

AMPERE-HOUR CONTROL FOR CHARGING CAR LIGHTING BATTERIES

A system of ampere-hour meter control of the charging current for car lighting batteries has recently been brought out by the Consolidated Railway Electric Lighting & Equipment Company, New York, and is on exhibition at their booth.

This system supplements the voltage control in such a way as to eliminate the necessity of constant readjustment to meet varying conditions within the battery. The voltage over the battery terminals, when it is fully charged, may vary widely, depending upon the temperature, the condition of the electrolite, etc. With voltage control of the battery charging current, adjustment to meet these varying conditions must depend on the judgment of the workmen at the various points where the car receives attention. This results in frequent overcharging of the battery with consequent deterioration and the necessity of frequent inspection and cleaning.



Car Lighting Equipment with Ampere-Hour Meter in Circuit

In the new system an ampere-hour meter is placed in the circuit in series with the battery. While the battery is recharging, the meter registers the ampere-hours until the proper amount of current suitable to the capacity of the battery has been received. As this point is reached the hand on the dial of the instrument closes a circuit which allows the voltage control to operate, cutting off the charging current in the usual manner. When once adjusted to the minimum voltage to be met with over the terminals of the battery when fully charged, no further adjustment of the voltage control is required, as the ampere-hour meter will not allow it to operate until the battery is fully charged. Should the meter get out of adjustment in such a way as to operate while the battery is still undercharged the voltage control allows the recharging to continue until the predetermined voltage has been reached.

The meter not only controls recharging of the battery but indicates the condition of charging at any time. An additional integrating meter is included which records the total ampere-hour discharge of the battery from the time it enters service till the meter is reset. This provides a complete record of service during the life of the battery.

SEMI-INDIRECT CAR LIGHTING FIXTURE

The illustration shows a semi-indirect lighting fixture for use with Pintsch mantle lights which may be seen at the Safety Car Heating and Lighting Company's exhibit on the pier. The bowl is colored in a soft dark shade of old rose with a design intaglio etched through this color. The interior of the bowl is plated with white opal glass, which provides the surface for reflecting the light to the car ceiling. This type of fixture is designed to transmit a large amount of light, the remainder being reflected and diffused by the car ceiling.

Semi-Indirect Lighting Fixture

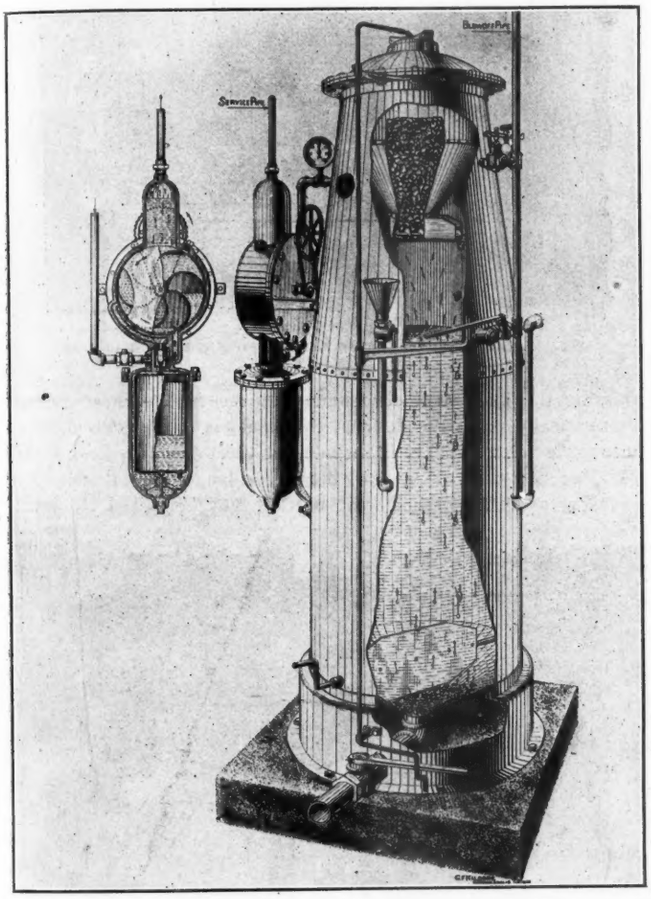
VULCAN ACETYLENE GENERATOR

The accompanying illustration shows a phantom drawing of the Vulcan automatic acetylene generator which is made by the Vulcan Process Company, Minneapolis, Minn. This generator is employed for generating acetylene to be used with oxygen in welding and cutting torches. The principal features of this machine are that it works automatically without the use of rubber diaphragms, springs, weights or motors, and produces acetylene only as it is used, thereby permitting a constant pressure to be maintained.

The carbide is placed in a hopper at the top of the generator, from which it is fed by a screw. This screw is operated by the paddle wheel shown at the left of the generator, which is made to revolve by the gas passing from the generator to the outlet. A constant pressure of the gas is maintained by a pressure regulator in the form of a float valve located directly below the paddle wheel. This valve will operate at a pressure variation of less than two ounces. It is thus apparent that the

rate at which the carbide is fed varies directly with the rate at which the gas is used. A safety valve is provided at the top of the generator and discharges directly to the blow-off pipe, which should be carried to the outside of the building in which it is used.

When loading the generator the vent valve, located at the level of the water, is opened to relieve the pressure. With the handle of the vent valve turned to the open position it is possible to turn the guard rod so that the filling cap at the top and the drain valve at the bottom may be opened. An agitator is provided at the bottom of the generator to aid in washing out the



Vulcan Acetylene Generator

sludge. With the hopper refilled and the valves closed, the sprocket wheel at the left is turned by hand until sufficient carbide has been fed to generate enough gas to operate the machine automatically. The generator will handle lump carbide up to and including ⅜ in. x 1¼ in.

GEM AND CROWN CURTAIN FIXTURES

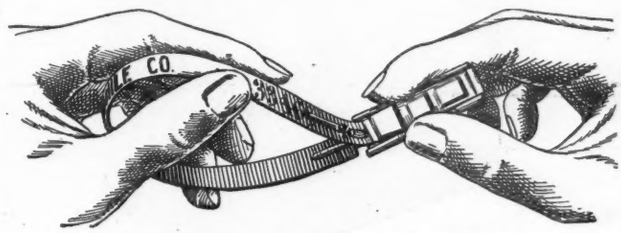
The Acme Supply Company, Chicago, has added to its appliances a simple and efficient curtain fixture made in two styles—the "Gem," with a comparatively short head and pinch handles, and the "Crown," with a longer head and no pinch handles. These fixtures have a friction surface at the center, which projects slightly beyond the two wheels at the ends of the tip. This arrangement secures just enough friction when the bottom of the curtain is level to prevent its creeping, and at the same time it may be moved by the passenger without the use of the pinch handles. Should the bottom of the curtain be pulled out of level, the fixtures are so designed that the wheels bear on the groove in such a way that the fixture is automatically self-righting, and will not be pulled out of the grooves.

AUTOMATIC CAR SEAL

A new type of car seal is being exhibited by the H. W. Johns-Manville Company, for which a number of advantages are claimed. The seal is made in two pieces. The strap and lock case are of one piece, so formed that the locking piece is entirely enclosed. The sides of the lock case are electrically welded at a point which protects the lock unless the mechanism is destroyed beyond repair.

A feature of the seal is a series of ribs or grooves so placed at the ends of the strap that when the seal is applied these interlock and block the opening in the lock case, thus preventing the strap from being clipped and the new end reinserted in the lock opening without this condition being easily detected. The fact that the entire outside portion of the seal is of one piece adds greatly to the ease of detection if the seal should be cut.

The surface of the strap is coated with paint on which is



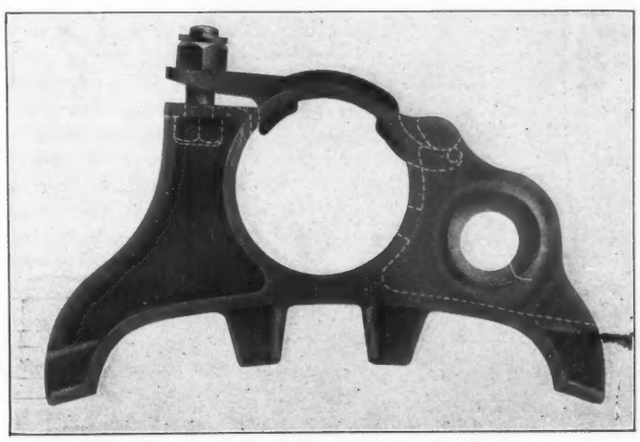
Car Seal Showing Locking Operation

printed in heavy black type the letters and numbers desired. It is claimed that the paint and ink are weather proof and will stand up indifinitely under severe weather conditions, and will not rub off in handling. The seal can be applied easily and quickly because it requires no sealing press. It is automatically locked on inserting the end of the strap into the lock opening and forcing it in as far as it will go.

SAFETY ADJUSTABLE BRAKE HEAD

The Buffalo Brake Beam Company is exhibiting a safety adjustable brake head which embodies a number of improvements over the head of similar construction which was exhibited last year.

A self-locking feature has been added so that the head will remain locked in position should the clamping bolt and nut be

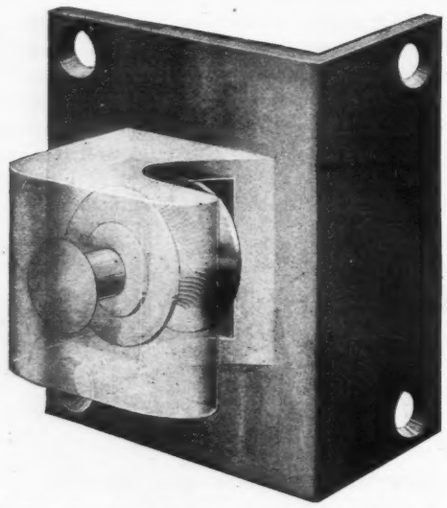


Buffalo Safety Adjustable Brake Head

lost, or the bolt broken. As indicated in the illustration this is effected by lugs on either side of the upper end of the adjusting key which hold the key in the head and cause it to remain in the locked position by the action of its own weight. By cutting away the middle portion of the safety adjusting key, where it clamps against the beam, the head has been made interchangeable with all brake beams of standard make.

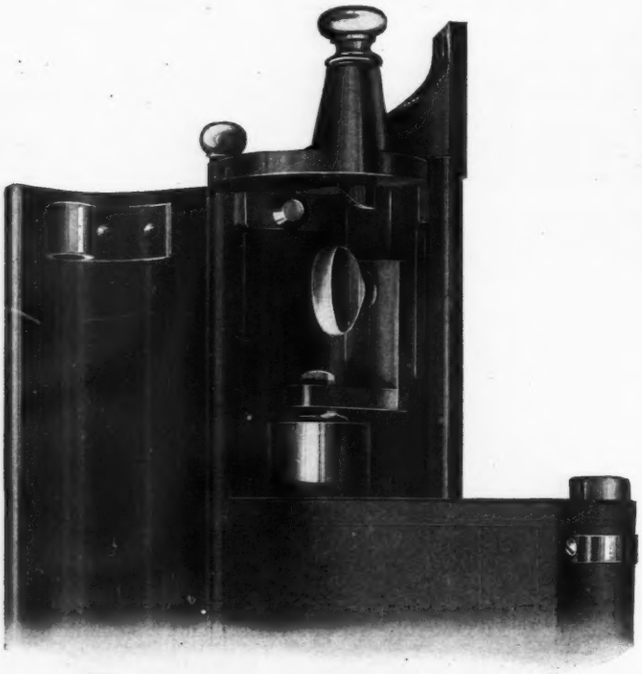
VESTIBULE CURTAIN FIXTURES

An automatic release for vestibule curtains is being exhibited by the Curtain Supply Company, Chicago. Its purpose is to protect the curtain from damage when coaches are uncoupled with the curtain still hooked in place. The illustrations clearly show how the device is operated. A strip of webbing is attached to the curtain at one end and to the latch trigger at



Roller Bearing Hook for Vestibule Curtains

the other. This is arranged to roll and unroll with the curtain, but when it is entirely unrolled there is still one-quarter turn of the curtain on the roller. The webbing therefore pulls tight and releases the latch before any strain has been brought to bear upon the curtain. Where the construction will not permit of directly attaching the webbing to the curtain roller it may

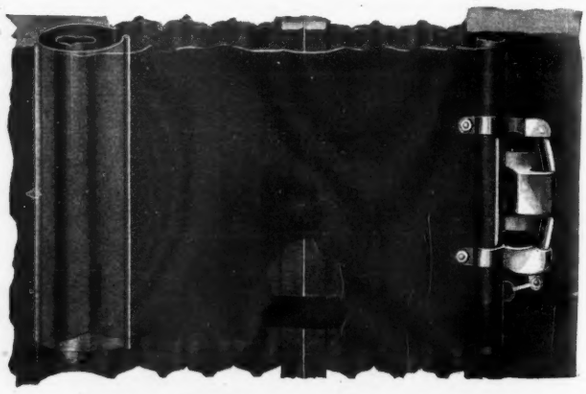


Hinged Curtain Shield with Adjustable Roller Bracket

be attached to the post by means of a small fastener and screws.

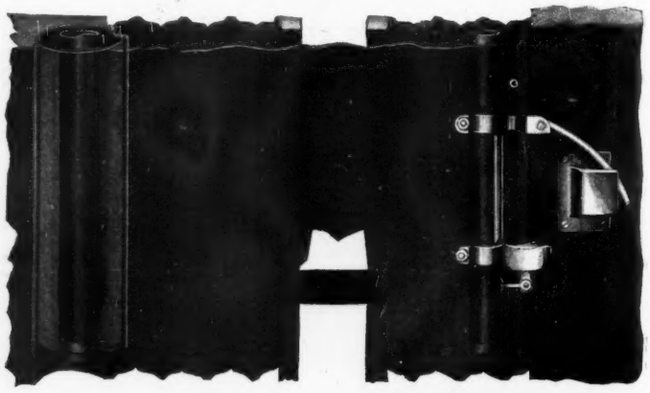
The curtain hook, which is shown in phantom in one of the illustrations is designed for use with the automatic curtain release. It has a roller bearing for the curtain handle to minimize the wear both on the hook and the handle.

One of the illustrations shows the upper portion of an opening shield for vestibule curtains, which is adaptable to both wood and steel cars. The shield is formed of two semicircular parts of heavy sheet steel, hinged together, with the edges rounded to protect the curtains. At the top and bottom it has malleable castings which serve as supports for the shield, act as roller brackets and also form the means of attachment to the car. The shield is held closed by spring latches at top and bottom, which can be easily released by lifting the knob at the top and



Automatic Release in Running Position

pressing the latch at the bottom with the foot. These fasten automatically when the door of the shield is swung closed. An adjustable roller bracket is included at the top which does away with the necessity of making the roller length adjustable. By releasing a thumbscrew the top bracket may be raised 1¼ inch,



Trip Released by Separation of the Coaches

which is more than sufficient for the insertion or the removal of the roller and allows for any slight differences in the length of the rollers.

Another development of interest is the steel extension plug and locking device for adjustable curtain rollers, by means of which the length of the roller can be quickly adjusted and the extension sleeve securely locked in any desired position. This is applicable to either vestibule or window curtain rollers.

PEDESTAL JAW TRUCK FRAME.—A cast steel truck frame has recently been developed by the Gould Coupler Company and is being exhibited for the first time this year. The ends of the frame are designed for use with pedestal type journal boxes, which are securely locked to the frame by means of heavy keys pocketed therein and held in position by means of cotters. By removing these cotters the keys may be drawn inward permitting the removal of the boxes, as the pockets open on the journal box space and the keys are put in place before the boxes are mounted in the frame. It is impossible to remove the keys from the pockets after the boxes are in position.